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AUGUST
1925

VETERINARY MEDICINE

4753 GRAND BOULEVARD, CHICAGO

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VOL. XX No. 8

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Veterinary Medicine

VOL. XX AUGUST, 1925 No. 8

Prize Winners For August

1st Prize, H. J. Davis, Aylmer, Ontario
2nd Prize, G. W. Browning, Mobile, Ala.
3rd Prize, J. M. Fawcett, Regina, Saskatchewan
4th Prize, A. R. Mahan, Marysville, Cal.

Twenty-one manuscripts were received and entered in the August contest, covering an unusually wide and interesting variety of subjects. Space does not permit the publication of all of them in this issue, but the rest will appear in early numbers.

The judge to whom these reports were submitted suggested that, inasmuch as the names of the contestants were not supplied him, his name be not supplied to the contestants, and unless someone has an absorbing curiosity to know, we will let it rest at that.

The awards were as follows:

First prize: Fifteen dollars to Dr. H. J. Davis, Aylmer, Ontario, for his report on the radical operation for poll evil.

Second prize: Eight dollars to Dr. G. W. Browning, Mobile, Ala., for his report on the use of acetone in surgical operations.

Third prize: A yearly subscription to Veterinary Medicine to Dr. J. M. Fawcett, Regina, Saskatchewan, for his discussion of castrating stallions in the standing position.

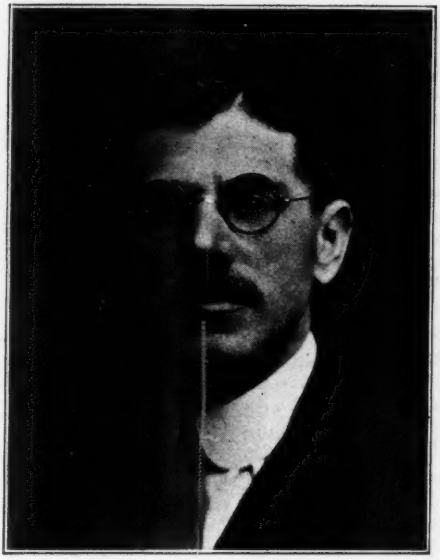
Fourth prize: Two dollars to Dr. A. R. Mahan, Marysville, Cal., for his report of a hound that had an encounter with a porcupine.

In submitting his decision, the judge made the following comments:

"The selection of the four reports that received prizes was exceedingly difficult. There were so many good reports that I should have liked to have given at least ten first prizes, but such not being in accordance with the rules, the selection was based on the following reasons:

"The first prize was awarded to the report on operation for poll evil because the discussion was clear, concise and to the point, and the operator appears to have found a method of anesthesia particularly adapted to such cases. The report, therefore, possesses unusual value for others who wish to perform the same operation.

"The second prize was given to the discussion of the use of acetone in surgical operations,



Dr. J. K. Bosshart, Camden, N. Y., winner of first prize in March for his report on intussusception in a cow.

again because of the clear, concise treatment of the subject, the usefulness of the report to others, and the eminently successful outcome in what many would have considered a hopeless case. It carries a good lesson.

"The third prize was awarded to the article on castration of stallions in the standing position, because of the encouragement it may give others to adopt this method of castration, which is not as common as it should be. Two other articles, one on esophageal choke in a horse and one on cesarean section in a cow, were excellent case reports and by many might have been awarded third prize, but it was believed they did not carry an equally valuable lesson to readers.

"The fourth prize, awarded to the article describing a hound that had an encounter with a

porcupine, was placed because of the rarity and severity of the case, and further because of the interesting manner in which the subject matter was presented."

The judge further stated that the following deserve favorable mention, and doubtless at the hands of a different judge some of them would have been awarded prizes.

Esophageal Choke, by Rembrandt Morgan, Winfield, W. Va.

Cesarean Section in a Cow, by J. R. Merrick, Oberlin, Ohio.

Rupture of the Esophagus, by J. J. Shelly, Bethlehem, Pa.

Encounter with Enraged Bull, by A. R. Rowat, Honokaa, Hawaii.

Rupture of the Diaphragm in a Cat, by James O. McCoy, Lakewood, Ohio.

Liver Trouble in Horses, by Ross H. Arnett, Medina, N. Y.

Castration Without Post-Operative Edema and Hemorrhage, by H. B. Wintringham, Berkeley, Cal.

To date, for the first eight months of the year, 154 veterinarians have sent in a total of 221 reports for the contest. The widespread interest in the matter is indicated by the fact that these contributions have come from 40 states, the territory of Hawaii, five Canadian provinces, the British West Indies and England.

The excellence of the material submitted is another noteworthy feature. In fact, every judge has found difficulty in choosing the winners from such a wealth of manuscripts so uniformly good.

For a time prior to the inauguration of this contest by Veterinary Medicine, the general impression prevailed that veterinarians no longer had much aptitude or inclination to record cases. This view must now be revised, as the reports already published show that practitioners have not lost their knack of writing up cases, but have actually improved to a marked degree in their ability to observe and select from their practice the cases worthy of record.

As stated at the beginning of the contest, the greatest reward of those who send in this material is their satisfaction in having contributed to the general fund of professional information and helped others. If you find these reports interesting and helpful, remember that others would be equally well pleased to read about some of your cases.

Over 15,000 breeders in 46 different states were using pure-bred sires, January 1, 1925.

THE CONTEST FOR SEPTEMBER

In addition to the regular prizes, we are renewing our offer of a copy of the new second edition of "Veterinary Prescriptions," or a copy of the new edition of Hall's "Diagnosis and Treatment of Internal Parasites" to everyone submitting a report or discussion. You do not have to wait for the decision of the judge to get one of these books. The receipt of your report for the September contest will entitle you to a copy, which will be mailed at once.

The regular prizes are as follows:

First prize of $15.00 for the most valuable discussion.

Second prize of $8.00 for the second most valuable discussion.

Third prize, a yearly subscription to Veterinary Medicine.

Fourth prize, $2.00.

The conditions of the contest are given in detail in the June issue.

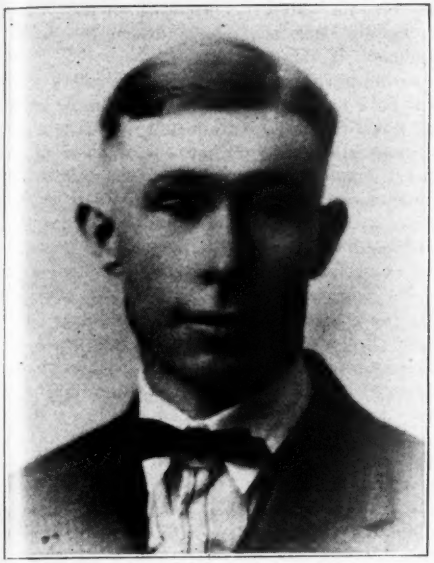
The contest for September closes August 10th. We urge readers to participate in it. Write up and send in your interesting experiences of the season while the details are still fresh in your memory.

FEDERAL MEAT INSPECTION SHOWS HEALTH OF ANIMALS

Of approximately 80,000,000 meat animals passing under the scrutiny of Federal inspectors, during the last fiscal year, the vast majority proved to be healthy and went into the various channels of the meat trade. But the fact that slightly more than a third of a million carcasses and nearly 1,500,000 parts of carcasses were condemned at slaughter indicates the searching character of the inspection. The report of the Chief of the Bureau of Animal Industry, United States Department of Agriculture, recently issued, gives the latest comprehensive information on the health condition of cattle, sheep, and hogs.

Though designed primarily to safeguard the wholesomeness of meat offered to the public, meat inspection renders a valuable service to livestock producers also in keeping them informed of the health of their animals at time of slaughter.

Of the 35 principal diseases and ailments that affect livestock, tuberculosis is by far the most serious. It was responsible for about two-thirds of the condemnations of cattle carcasses and near half those of swine. Tuberculous conditions were found also among a few sheep, though these animals rarely are affected. The next most serious disease, according to meat-



Dr. C. E. Teague, formerly of Thompson, Ia., now at Dayton, Ohio, winner of second prize in April for his discussion of porcine obstetrics.

inspection records, is hog cholera. Actual losses are considerably heavier than those records show, since hogs affected with that disease usually die on the farms.

Pneumonia, peritonitis, and a group of similar ailments rank next in the damage they cause, followed by septicemia. In the case of calves, immaturity is an important reason that many fail to pass inspection. Among the figures for cattle, injuries and bruises rank high, causing the condemnation of the meat of more than 4,000 entire carcasses.

Although a few cases of rabies have occurred in dogs that had been given the single injection rabies vaccine, this method of prevention of rabies is commendable and should be continued. The amount of antigen or immunizing substance is probably dependent not only upon the strain of virus but also upon the quantity of brain tissue administered. Some practitioners have reported the occurrence of abscesses following the subcutaneous injection of the rabies vaccine. The development of abscesses is a serious handicap, probably for two reasons; first, it is objectionable to the dog owner and second abscess formation may destroy the vaccine before immunity is established. Why not avoid the occurrence of abscesses by injection of this vaccine into the peritoneal cavity?

INSPECTION SAFEGUARDS SEA TRIP OF EXPORT LIVESTOCK

When animals of the United States travel to foreign parts their feed, water, and comfort en route are assured to be up to a high standard. Due chiefly to improved conditions in vessel fittings and good care, losses of livestock exported from the United States have been greatly reduced, averaging for cattle in certain recent years less than one-fourth of 1 per cent during the voyage. In former years when no adequate inspection was made, losses of stock exported from this country exceeded 4 per cent. As a result of proper inspection insurance rates on export livestock have been greatly reduced.

A report recently issued by the Bureau of Animal Industry, United States Department of Agriculture, which has charge of vessel inspections for export livestock, shows gratifying progress in this work. Of 35 consignments of cattle to Great Britain and Pelgium, during the last fiscal year, the loss en route was less than 0.2 per cent. The shipments consisted of 18,843 head. The report shows also that 270 stock-carrying vessels received inspection during the year.

Dr. Zac T. Nalls, Jasper, Fla., and his son. Dr. Nalls won fourth prize in April for his report on Filaria immitis in a dog. He states that his son is a future veterinarian.

A VETERINARY EDITOR'S MAIL

Dr. M.————, a Michigan veterinarian, writes: "A report has reached me that Veterinary Medicine is supplied to the laity and to quacks. Tell me, please, whether this is the truth."

In the same mail, E. F. L————, for many years president of the Hawkeye Veterinary Association, an association of nongraduates, writes: "The reason I have never subscribed to Veterinary Medicine is, in the first place, I am not a graduate of any veterinary college. I have been a practitioner for forty-four years. I practiced before there was a college in the United States. My father was a veterinarian and I grew up in the business. I have practiced in Iowa for thirty-nine years, twenty-seven years in my present location. Your journal has never recognized me because I had not gone somewhere and bought a diploma as hundreds of other pinheads have done and then made a failure of the profession. I have put fourteen of them out of business since I have been here, but I am here yet, and I have all the practice I want because I have been able to deliver the goods.

"Then you always boosted for the vaccination-of-hogs graft. You have always been against the nongraduates and that is why I have not and will not read your journal."

Someone has forcefully said that when partisans on both sides lambast you, you are probably about right.

We replied to the first correspondent that without doubt some copies of Veterinary Medicine reached other than veterinarians; that we know that this is true to the same extent of all other veterinary publications; that we know of no technical publication that is able to confine its distribution exclusively to its own field; that such reports as he refers to are spread exclusively by those who hope to profit from them and that they belong to the most malicious of all lies, because there is an element of truth in them.

If any veterinarian wants to convince himself of the essential asininity of such a report, let him take a copy of Veterinary Medicine under his arm and start out and solicit subscriptions for it from the hard-headed farmers, or any other kind of farmers. Some experience years ago in the farm paper field, thoroughly convinced us of the difficulty of getting farmers to subscribe to the best agricultural and live stock weeklies at $1.00 a year. To attempt to get $4.00 a year from them for a monthly publication, not ten per cent of which they could understand and use, is too absurd for further comment.

In the not distant past, three veterinary journals have been established in this country catering chiefly to the nongraduates. Although presumably adapted to the purpose, not one of the three completed its first volume, and only one issued more than five numbers. Whatever else this may indicate, it surely does indicate that nongraduates are not a fertile field in which to sell subscriptions to a veterinary publication.

The latter correspondent, while he avers he has never been a subscriber to Veterinary Medicine, yet presumes to a familiarity with its policies and content. His charge that it has favored the hog cholera vaccination graft, recalls the statement of an egotist, who stated there are just two classes of people in the world—those that think as he does, and those that are wrong.

That those of an open mind and a desire to learn, find material of value in Veterinary Medicine is evidenced by many thousands of commendatory letters that have been sent us, as for example, Dr. J. J. M., of Massachusetts, says: "Cannot get along without Veterinary Medicine. It is very instructive and refreshes my memory on names and cases."

Dr. R. A. S., also of Massachusetts, says: "I do not want to miss one copy of Veterinary Medicine. The clinical report contest is certainly bringing out some interesting reading."

Dr. G. H. N., of New York, says: "Veterinary Medicine is a good, live-wire, of interest to all practitioners. I would not dispense with it and wish it a long and prosperous career."

Dr. L. A. E., of Vermont, says: "Allow me to congratulate you on what you have made of Veterinary Medicine. I like it because there is so much in it that the average practitioner may apply every day. I enclose a report for your Case Report Contest."

Dr. G. R. C., of Kansas, says: "Veterinary Medicine is a valuable magazine, and cheap at the price for any wide awake veterinarian."

Dr. G. G. F., of South Dakota, says: "I am sending four volumes of Veterinary Medicine to the binders today, to be bound. They are a source of real information that cannot be found in text and reference books. I did not realize this until a couple of months ago when I attended a meeting for the purpose of discussing area tuberculin testing where there were many men with many questions, the answers to very few of which could be found in modern texts or references. When I came home, I made a

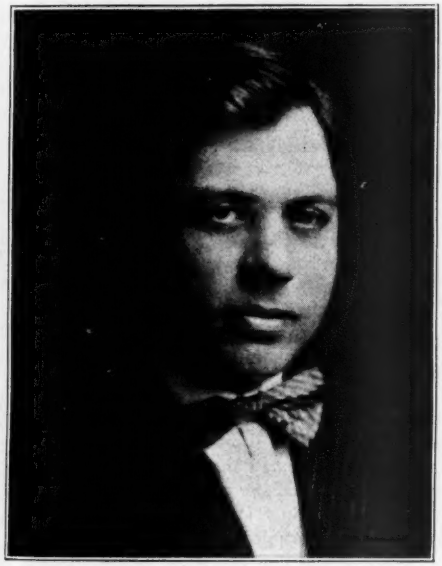
search for the answers to these questions and invariably found them in the files of Veterinary Medicine. If I could not replace them, $25.00 a volume would not buy my old copies."

Dr. H. J. M., of Minnesota, says: "Accept my congratulations for the success of your Case Report Contest. I find the reports absorbingly interesting, and I note that another is trying to copy the idea. Well, it is only the good article, you know, that is imitated."

Oh, well, what's the use. Every reader of Veterinary Medicine projects himself to a greater or lesser degree into what he reads. If he has a grouch, he will probably find material to feed it there; if he wants to learn from its pages, the opportunity is open to him.

UNIFORM RULES NEEDED FOR ACCREDITING FLOCKS

The poultry-breeding industry of the United States is making a determined effort to bring harmony out of the confusion that now exists because of the differences in the rules and regulations applied to certification and accreditation of flocks in the various states. Under present conditions when a prospective purchaser of hatching eggs, baby chicks, or breeding stock comes across the word "accredited" or "certified" in connection with the advertised flocks, he does not know just what factors were taken into consideration to certify or accredit these flocks, unless he is familiar with the regulations governing such work in each state. The great difference in methods, plans, and rules governing the accreditation and certification of poultry in the different states is serving to retard the progressive development of the industry and is unfairly shielding some breeders whose flocks are certified under less stringent rules than others.



Dr. H. J. Magens, Stewartville, Minn., winner of second prize in May for his discussion of publicity and poultry practice.

Dr. S. P. Holtz, West Point, Iowa, winner of first prize in May for his report on an obstetrical case in a mare.

At present there are 22 states which have adopted regulations for certification and accreditation of flocks. The difference that exists between the regulations in these states is seen in the case of baby chicks. In one state chicks are sold by grade based on the production of the parents; in another case two grades of chicks are offered, one grade being from accredited flocks that are not tested for bacillary white diarrhea, and the other grade from flocks that have been tested and are found free from the disease. In another state chicks are sold on a basis of four grades according to the grading of the adult birds, and the grading of the adult birds is based on their general qualities. Still another sells certified as well as two other grades of chicks, the certified chicks being produced

from certified males mated to certified females, while of the other two grades the first are chicks produced from old hens mated to certified cockerels, and the second grade are chicks produced from certified pullets mated to certified cockerels.

The general committee appointed to cooperate with the poultry office of the United States Department of Agriculture has made a survey in which this same degree of difference in state rules and regulations was found to exist in regard to hatching eggs and breeding stock as well as baby chicks. The committee is of the opinion that if the states can get together to discuss these differences much can be done to stabilize the poultry-breeding industry. Also, from the standpoint of interstate commerce in hatching eggs, baby chicks, and breeding stock, the commitee feels that uniformity in the state rules and regulations concerning the accreditation-certification work is necessary if poultrymen are to retain this business.

ERADICATION OF CATTLE TICK IS IMPORTANT WORK

In the Louisiana State Times of June 29th, Dr. W. H. Dalrymple of the Louisiana State University, in discussing livestock conditions in the state, especially with reference to Texas fever, is quoted as drawing a parallel between the extermination of yellow fever and the control of malaria through screening and other methods of preventing infection by mosquitoes and the extermination of the cattle disease through dipping and eradication of ticks which transmit the malady.

"The failure of the French attempt to dig the Panama canal, with its appalling loss of life," said Dr. Dalrymple, "was traceable solely to the ravages of two insect-borne diseases—yellow fever and malaria. Thousands of laborers, in one relay after another, were stricken down, as were doctors, engineers, nurses and others, by these deadly and at that time little understood diseases, and Panama became the 'white man's graveyard.'

"No government, or its engineers, could possibly hope to succeed under such a handicap, and the 'big ditch' with its expensive equipment had to be abandoned.

"Up to this time no instance of disease transmission by insects had been proved or seriously suspected. In 1889-90, came the revolutionary discoveries of Drs. Smith, Kilbourne and Cooper-Curtice of the U. S. Bureau of Animal Industry, definitely connecting the southern cattle tick with the transmission of Texas fever, and a new epoch in medical science was born."

Dr. Dalrymple pointed out that following this discovery of insect transmission of disease among cattle, transmission of malaria and yellow fever by mosquitoes was proved a few years later, paving the way for the conversion of Panama from a veritable "pest hole to a most healthful region," resulting in the completion of the canal connecting the Atlantic and Pacific oceans and opening a new route for ocean liners.

"Medical science had made an advance," said Dr. Dalrymple, "which has led to a fuller comprehension of some of the world's greatest scourges, because a small group of veterinarians, some thirty-five years ago, decided to see what a crop of young infected cattle ticks would do to some cattle in connection with the transmission of the germ (a protozoan) of Texas fever.

"The most astonishing thing to me, in connection with the whole matter, is that while the medical profession and the authorities cooperating with them at once took advantage of this important veterinary discovery and set about to eradicate the mosquito transmitting yellow fever and malaria, making many fever-stricken sections of the world habitable, so many of our southern cattle owners are still dilatory in their efforts and so indifferent about cooperating with the authorities to get rid of the cattle fever ticks, the accomplishment of which means so much to our southern country.

"We continue to advertise to the world our wonderful possibilities in cattle production, which is true, but at the same time it is an absolute certainty that before the South can obtain full benefit from its exceptional opportunities, the Texas fever tick must be eradicated; and the sooner it is an accomplished fact, the sooner will all of our people receive the benefit, which is so earnestly desired."

MAYBE IT IS DUE TO THE CLIMATE

The Byron, (California) Times is authority for the statement that a valuable horse belonging to Mr. B. H. Baird was bit by a huge rattlesnake, but that the local veterinarian by heroic work saved the animal after partial rigor mortis had set in. It admits that this is considered a remarkable instance of recovery.

If we assume that rigor mortis did not begin until the lapse of the usual time after death, we can quite agree that it was a remarkable recovery.

GETTING AWAY WITH IT

Dr. Henry Hell, Wilton Junction, Iowa, chairman of the Publicity Committee of the Eastern Iowa Veterinary Association, sends some spicy literature being distributed by the Beebe Laboratories, and Dr. S. R. Howard of Hillsboro, Ohio, sends us an equally interesting but different batch of material from the same source.

It seems the Beebe Laboratories have a little booklet entitled: "The Treatment of Diseases of Farm Animals by the Use of Vaccines, Bacterins, Serums, Antitoxins and Drugs."

The enclosure that goes with the book, says: "Every modern farmer should treat his own live stock. The enclosed booklet will tell you how you can save money and be your own veterinarian." In his letter soliciting orders for the book, Dr. Beebe says:

"I have a book you should have. It tells about the common diseases of farm animals. It also tells **how to treat** these diseases. This book can save you many dollars. You can do your own veterinary work. It gives simple directions for home treatment of animal diseases. Every farmer should have this book. You can get it free!

"Following are a few of the things it explains:

'How to test chickens for tuberculosis.'
'An easy way to clean cows after calving.'
'How to steam a horse's head and treat influenza.'
'How to get rid of worms in hogs, sheep or horses.'
'How to vaccinate chickens, turkeys, etc.'
'How to draw blood for the blood test for abortion.'
'How to treat contagious abortion in cattle.'
'Other cattle diseases and their treatment.'
'How to vaccinate hogs for hog cholera.'
'How to test milk for butterfat.'
'How to figure a balanced ration for dairy cows.'
'How to tap and how to vaccinate a cow.'
'How to make a balling gun for horses.'
'How to drench a cow.'
'How to judge dairy cattle.'
'How to treat hemorrhagic septicemia in sheep.'
'How to tell the age of a cow.'
'Dog diseases and treatment.'
And many other important things.

"Each thing is explained in simple, every day language and over sixty pictures illustrate the text. So complete and thorough is this book that many agricultural teachers have sent for copies for use in their class work. It is practical in every way for general use by farmers, breeders, feeders and herdsmen.

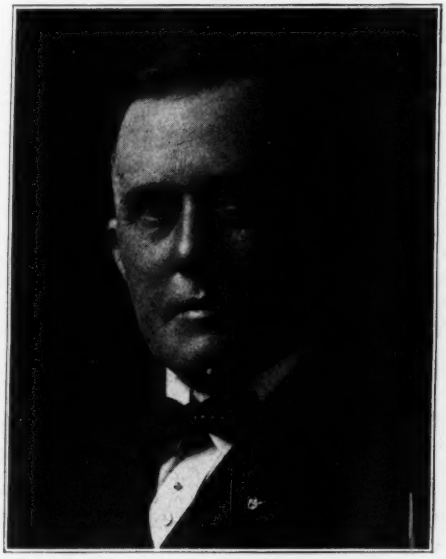
"I cannot afford to give this book away. It has cost me too much. I will tell you how you can get a copy, however," etc.

The price list accompanying the foregoing letter, lists some fifty remedies ranging from Dr. Beebe's Abortion Bacterin to Sheep Worm Capsules; he insures hogs against hog cholera and supplies all sorts of blackleg vaccine; a remedy for caked bag and lump jaw; a mange ointment and a distemper treatment; navel ill bacterin and a cattle physic, and so on ad nauseum.

From the literature, it appears that the county agents have "fallen for it" in considerable numbers. A score of testimonials written by the county agents in twenty different states accompany the list. Some of these testimonials are entertaining reading.

An Oregon county agent says of the book: "It contains some valuable information. I would like to hand about fifty copies to stock men if you could supply that number."

A county agent from Mississippi says: "Allow me to congratulate you on your book on



Dr. Chas. J. Gruber, Ft. Wayne, Ind., winner of third prize in May for his discussion of cesarean section in Boston Terrier bitches.

diseases, symptoms, etc. It is most excellent and practical."

A Wisconsin county agent says: "It is a very complete manual, and treats a number of the most important diseases of live stock on the farm."

These county agents seem to have no doubt as to their ability to appraise a veterinary work.

The thing that suggested the headline is the fact that Dr. W. L. Beebe is listed as an active member in the 1925 membership role of the A. V. M. A..

No, we haven't done anything about it. Neither have you.

CITY HEALTH OFFICERS

In the 1925 directory of health officers in cities of 10,000 or more population, published in the Public Health Reports, July 3rd, the following veterinarians are given as the heads of the health departments in their respective cities:

Benjamin N. Pennell, D. V. S., New London, Conn.

Francis X. Mahoney, M. D., M. D. V., Boston, Mass.

Joseph C. Saile, P. H. G., D. V. S., Bloomfield, N. J.

Chas. S. Thompson, D. V. S., Perth Amboy, N. J.

William F. Reynolds, D. V. M., Ridgefield Park, N. J.

Charles V. Peace, V. M. D., Ph. G., Coatesville, Pa.

E. R. Van de Grift, D. V. M., Anderson, S. C.

THE TRUE PROGRESSIVE

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."

Mineral mixtures constitute a fad at the present time—nothing more, nothing less. They are being exploited in the same way that many vitamin preparations were, a few years ago—as panaceas. Unquestionably there are instances of certain mineral deficiencies, in certain localities and in certain feeds raised in these localities. It may be one element here and another some place else. How can any mineral mixture be concocted and safely administered to meet all demands in all places? Intensive studies in nutrition and metabolism have shown that there is a delicate balance to be maintained between mineral elements—calcium and phosphorus, for example. If one is deficient, it alone should be added. It should be prescribed by a veterinarian to meet the needs of the individual case. It should not be given with all the other minerals, in the form of a shot-gun mixture, on the say-so of a peddler.—Excerpt from editorial in Journal of the A. V. M. A.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Veterinarian and Physiologist

Receipt of applications for veterinarian and physiologist will close August 25. The examination is to fill a vacancy in the Bureau of Dairying, Department of Agriculture, Washington, D. C., and vacancies in positions requiring similar qualifications.

The entrance salary is $3,800 a year. Advancement in pay may be made without change in assignment up to $5,000 a year. Promotion to higher grades may be made in accordance with the civil service rules.

The duties of the position consist of the care of the health and the medical treatment of the breeding herds of dairy cattle of the Bureau of Dairying; assisting in the anatomical studies of dairy cattle in the project on relation of conformation to production, and planning and executing research in the physiology of production and reproduction in dairy cattle.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience; and a thesis or publication to be filed with the application.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or customhouse in any city.

The highest courts in over thirty states in the union have upheld the regulation requiring milk inspection. It is usually conceded that the police control of milk is a problem of vital interest to the welfare of the community, and the regulations for the control of milk and milk production are diminishing epidemics of milk origin.

Underground water, wells and springs may be polluted by excreta deposited at variable distances from the supply. It has been demonstrated that well water may be polluted at a distance of 200 feet in a soil that is rather porous.

Oestrous Cycle in the Domestic Cow (Bos taurus) Effects of Ovarian Extracts (Sixth report)*

H. S. Murphey, G. W. McNutt, B. A. Zupp, W. A. Aitken
Department of Anatomy, Iowa State College

Our attention was first attracted to the functions of the ovarian follicle by the statements of Robinson, in his report of 1918 on ferrets and ferret-polecat hybrids, in which he made the statement that "the phenomena of pro-oestrum and oestrus only appear when a group of follicles has attained a stage of development which may be called preinseminal maturity, and the phenomena are due to some secretion produced by the follicles in that phase of their development." We personally collected ovaries from healthy cattle which showed on post mortem examination normal genital organs. In our observation approximately 40 per cent of the cattle come in this class, but since many of these were pregnant cows, only a small part of the 40 per cent had follicles large enough to be utilized. Our studies have shown that the size of ripe follicles in the cow varies between 10 and 19 m.m. All follicles under 10 m.m. were excluded.

The follicular fluid is aspirated with a hypodermic syringe, then diluted with four parts of physiological salt solution, filtered through asbestos wool, finally through a Berkefeld filter into sterile tubes, then stored in a refrigerator. We have arbitrarily fixed the dose as the amount of material derived from one ovary. We injected this material either into the subcutaneous abdominal or mammary vein or into the jugular vein, and a few cases subcutaneously. We had already observed that the oestrual flow was absolutely isotonic for blood cells and since we were using homologous material we did not believe that protein intoxication need be considered.

The results on spayed cows at first led us to believe that this material was the specific and only cause of heat. We still believe this is true although we have some failures recorded, especially in cases with a very short or a long time interval between doses. We were also unable to produce complete cytological changes, growth or infiltrations. Our later experiments with functionally sterile cows lead us to believe that some sensitizing substance or substances must be present in the uterus for a complete reaction. Our experimental results lead us to think probably this substance comes from the corpus luteum. In spayed bitches we have been unable to produce the marked vulvar swelling characteristic of heat; however, we have been able to establish the oestrous cycle in bitches which have remained in the pre-pubertal stage several months to a year after they would normally come in heat. In other words we have brought bitches into heat that had remained in a state of infantilism but we have been unable to change the semi-annual oestrual periods in bitches of known history. Pregnant cows have been brought in heat and coitus accepted. In the treatment of functionally sterile cows we have had the aid and co-operation in diagnosis of these cases by three of our colleagues on the clinic staff, Doctors Bemis, Covault and Walsh.

We are satisfied that more cases of sterility in the cow should be classified as functionally sterile than are so classified at present. As pointed out last year in the study of the cycle, the exact condition of the vagina and the cervix may be seen and examined by means of large tubular specula. By means of rectal palpation the body of the uterus, the cornua, fallopian tubes and the ovary may be palpated and the exact conditions recorded. While there are severe limitations to rectal palpation on account of the short mesorectum and mesocolon, it is usually possible to palpate even the very small bodies in the ovary and to determine the exact condition of the tubular part of the tract. One may become skilled enough to estimate within a millimeter or two of correct measurement of structures by this rectal examination. It is even possible to approximate the stage of the oestrous cycle where the history is inadequate.

The enlarged uterus of heat due to physiological congestion, edema and secretory content has a characteristic turgid feel that may be described as erect, soft to the touch, pliable, freely movable, and easily distinguished from the quickly developing erectness which often results from manipulation, or the pathological or the pregnant uterus. The exact knowledge which sterility workers have accumulated in this way allows us to state that more is known regarding the breeding diseases and abnormalities

* Read at the forty-first Session of the American Association of Anatomists, April 11, 1925, held at Cleveland, Ohio.

of the cow than of the female of any other species. The accumulation of this knowledge has been invaluable to us in separating the functionally sterile animals from those sterile from other causes. Some families possess certain structural defects of the genitalia which seem to be transmissible. In other cases sterility is due to faulty nutrition, and in still others there is a thyroid up-set. In a few selected cases we have been able to overcome this thyroid up-set by small doses of iodine administered either as potassium iodide or as tincture of iodine.

In spite of the brilliant experimental work that has been done by ovarian transplantation, we are unable to believe that the nervous system is not a factor in the functioning of the genital system even if only by control of the vascular system. We are also not convinced that hysterectomy proves that the function of the ovary is independent of the physiological state of the tubular part of the genitalia. In the first place the cycle affects all of the tubular genitalia, and so far as we have been able to learn, no one has yet removed all of the tubular genitalia, including the cervix, vagina, and urogenital sinus, in an effort to prove the independence of the ovary. We shall point out later in discussing the corpus luteum that the ovary has some relation to the functional activity of the uterus which has not yet been clearly elucidated. We shall also cite specific instances in which uterine dysfunction (cervicitis and pyometra) stops the ovarian function. We felt so sure of this dependence of the ovary on the uterus that we began to treat certain types of functional sterility with injections of the oestrual hormone. Where the heat history could be obtained the first dose was injected on the 18th or 19th day following heat, and by heat we mean that short period of six to twelve hours (occasionally sixteen or even twenty-four) during which the cow will accept coitus. Where the history is not known and the ovary was devoid of a corpus luteum, heat was produced by the first injection of follicular fluid. In either case, 18 days after the following heat period a second dose was injected and the animal bred at the next heat period. While the results showed only 50 per cent of these animals becoming impregnated at this single service, others became pregnant at the following service. According to Professor W. L. Williams' definition of sterility in the cow, namely, "A sterile cow is one failing to conceive after two services by a known potent bull," these would be included and would slightly increase our percentage of pregnancy results.

Some of the animals that failed to conceive were followed to post mortem and found to be cases of pathological sterility. One case may be cited which is not an uncommon type of sterility in the cow. This animal was bred and passed over three or four heat periods before coming in heat again. We have good reason to believe that she in reality aborted, due to disease of the uterine mucous membrane, (ex' cow No. 17). By eliminating all cases which were later determined to be pathological we are able to increase the percent of the number of pregnancies following the injections. But we admit that some of these functionally sterile cases which we successfully treated might have become impregnated if not treated. The functionally sterile cases we have treated will be subdivided into several classes as we gain more experience. One type in particular that has been considered hopeless, is the three or four year old heifer which may or may not show heat but is very fat and has developed a masculine head and neck, and if a pure dairy type has also developed a fullness of the thighs resembling the beef type.

In the use of corpus luteum, our first experiments were to determine whether the corpus luteum of the first 15 days of the cycle could be used to prevent heat. The corpora were either grouped in five-day periods and given in a corresponding part of the cycle or the material was mixed. The dose was very heavy, the equivalent of one corpus luteum being administered intravenously each day. The corpora were first ground in a mortar with sand, filtered through asbestos wool and through a Berkefeld filter, and the filtrate then kept in a refrigerator. Both the follicular fluid and corpus luteum extract were tested following the filtration through the Berkefeld filter, for bacterial growth, by Doctor S. H. McNutt of the Investigation Department.

Cows occasionally suffer from a condition described as cystic ovaries. There are at least two types of cases of cystic ovaries, the one showing an extreme nervous disposition while the other is less excitable. A percentage of both cases yields to treatment provided the cysts are broken frequently, but in the nervous cases the animal must be isolated from all other animals. We have tried injections of corpus luteum in these cases after aspirating the cysts per vagina, and have been able to quiet the animals and to stop the cyst formation tem-

porarily at least. However, our observations have been too limited to even hazard a guess as to whether or not the use of corpus luteum extract promises any results. We are now trying corpus luteum extract in single doses in the functionally sterile cases in which corpus luteum development is nil or poor. The work of Seckinger on corpus luteum extract and the recent paper by Dixon and Marshall lead us to believe that tone in the uterus is dependent in part directly or indirectly upon some substance coming from the corpus luteum. We have secured some benefit in cases where either the broad ligament or the uterus or both were atonic. In others, no benefit was apparent. Sterility in these cases is the rule and we have been able to get some positive results by the use of corpus luteum extract.

Our reason for using corpus luteum extract in certain types of sterility to increase the tone of the uterus resulted partly from the work of Corner, Keye and Seckinger, but in part also from the following facts which have been known to veterinarians for some time. First, some cows fail to come in heat and show no pathology except a persistent corpus luteum. In these cases the corpus luteum is squeezed out of the ovary per rectum, per vagina, or both. In some extreme cases surgical operation through the wall of the vagina is necessary. Within a short time following this expression the cow comes in heat. Some will conceive at this heat period but many not until the following heat period. Second, it not infrequently happens that a young heifer is accidentally bred by a scrub bull or even a pure-bred bull and it seems desirable to empty the uterus either to allow further growth or to fit the animal for the show-ring. If in early pregnancy (up to 64 days—Covault) the corpus luteum is expressed, then the animal aborts. Third, it sometimes happens that following parturition, lochia and other detritus remain within the cavity of the uterus which is atonic. In this condition if the retained corpus luteum of pregnancy is expressed, the uterus will contract down to normal and empty its contents in a few days. Fourth, when the uterus becomes edematous and the cavity filled with a lymph-like fluid, it may empty if the corpus luteum is expressed.

In cases two and three it frequently happens that the animal does not come in heat for some time. The explanation we have come to tentatively is that the corpus luteum mechanically, by interfering with the circulation, prevents the terminal development of an ovarian follicle. We were first led to this conclusion by a careful study of Clark's paper published in 1900. In any of the four types of cases chronicled, the corpus luteum may be expressed but still remain attached to the ovary suspended in the peritoneal cavity. In such cases, the cows of class one usually come in heat, but may not, while the cows of class two and three do not empty the uterus until the corpus luteum material has been detached and drops to the floor of the peritoneal cavity.

This confirms the findings of Seckinger that some substance from the corpus luteum increases the amplitude of uterine contractions. The mere removal of the corpus luteum from the ovary does not do it, but when this body falls into the peritoneal cavity we assume that it is broken down in part or completely by the leucocytes and the substance is then absorbed into the blood stream where it affects the uterine muscle.

Expression of a normal corpus luteum of heat often has no effect on the cycle (Covault). We believe a second substance from the corpus luteum is necessary, in some cases at least, to sensitize the uterus before the oestrual hormone will be effective. It is well illustrated in the first class of cases. We believe that the observance of these cases is sufficient to allow us the right to draw the above conclusions. In part they confirm some of the observations of Loeb.

In this connection, however, we must state that we have been able to produce heat with follicular fluid in a chronic case of pyometra with an atonic condition of the uterus when it was known to us positively that no corpus luteum had developed in the ovary for 15 months, so that it is possible that both the follicular fluid and the corpus luteum contain some substance which directly or indirectly increases the tonicity. The term indirect is used here on account of the recent experiments recorded by Dixon and Marshall.* Without removing the corpus luteum we have been able to empty the uterus of pus which had accumulated following parturition by the injection of corpus luteum extract.

We are sorry that we do not have time to give the detailed case histories in all of these experiments; nevertheless, it seemed advisable for us to present some of our working hypothesis to explain the results obtained.

The following experimental case reports were not read with the above paper:

*Jr. Phys. Vol. LIX, Nos. 4 and 5—Dec. 23, 1924.

Oestrous Cycle Dog No. 6

A German Shepherd bitch whelped June 28, 1923, came into the clinic on October 15, 1924, with a history that she had never been in heat. On October 17 and again October 21, she was injected subcutaneously with one dose of oestrual hormone. On October 24 the owner returned the case and she was discharging bloody fluid from the vulva. Vestibular smears showed a perfect picture of heat.

On January 9, 1925, this dog was killed by an automobile and on post mortem examination the ovaries showed corpora lutea indicating that ovulation had taken place at the October heat.

Oestrous Cycle Ox Ex. No. 3

An Ayrshire cow, four years old, came to our attention January 7, 1925. Her history was that she had had one calf born on September 8, 1924, and no heat since. This cow was on an official butter fat test and had to be pregnant before a certain date or the test would not be recognized.

Upon examination the entire genitalia was found normal but the ovaries were small, no corpora lutea were detected and only one very small follicle could be palpated. On January 7, 1925, the cow was injected intravenously with three doses of oestrual hormone. On January 8 she was injected subcutaneously with three doses of oestrual hormone. On January 10 she was injected subcutaneously with two doses of oestrual hormone. There was no change in any part of the genitalia except the follicle previously found in the left ovary showed a slight increase in size.

On January 11, cow was in heat and was bred. On January 12 cow was examined and follicle in left ovary was considerably larger. On January 13, cow was examined per rectum and ovulation had taken place from the left ovary and there was slight depression where follicle had ruptured. Uterus was erect and firm. Ovulation had taken place between 20 and 45 hours after service.

On January 14 corpus luteum was about 10 to 12 m.m. in diameter and stood out prominently. The right ovary showed a few small follicles. The uterus was erect. On January 20, cow was in heat again and was bred twice about six hours apart. Corpus luteum in left ovary was about 12 to 14 m.m. across. Remainder of ovary small. Right ovary had two follicles that could be palpated, one about 7 m.m. and the other about 9 m.m. in diameter. On January 23, the left ovary showed no change. The follicle in the right ovary which previously was about 7 m.m. in diameter could not be palpated, but no corpus luteum was detectable.

On January 26, the corpus luteum in the left ovary was about one-half the size it was on previous examination. Right ovary showed a corpus luteum with a well marked protuberance. No follicles could be detected in either ovary.

On February 6, the corpus luteum in the left ovary could still be palpated although it was small and firm. The right ovary contained a large corpus luteum estimated at 22 m.m. April 7, the corpus luteum in the right ovary was still as previously described. Left ovary very small, no trace of a corpus luteum. Uterus was enlarged and fluctuated, especially right horn which was almost two inches in diameter. Cow diagnosed pregnant.

Oestrous Cycle Ox Ex. No. 18

A pure bred Guernsey cow that came into heat regularly but would not conceive. Had been examined several times by Doctor Walsh but nothing abnormal could be found. She was in heat on October 10, 1924. On October 27, or seventeen days after the last heat period, she was injected intravenously with two doses of oestrual hormone. On the evening of October 29 and the morning of October 30 she was in heat. On November 16, 1924, or seventeen days after the previous heat period she was again injected intravenously with one dose of oestrual hormone. She was in heat on November 22, 1924, and was bred but owner reported a poor service. On December 17 cow was in heat again and bred.

On April 16, 1925, the cow was diagnosed pregnant.

Oestrous Cycle Ox Ex. No. 6

A pure bred Jersey heifer that had never had a calf and came into heat irregularly, was examined and showed nothing abnormal. She was in heat and bred on March 13, April 10, May 20, June 11, and July 24, 1924. On August 12, or 19 days after the last heat period, she was injected intravenously with one dose of oestrual hormone. She was in heat August 17th. On September 4, or 18 days after previous heat date, she was injected with the second dose of oestrual hormone. She was in heat and bred on September 6, 1924.

On November 14, she was diagnosed pregnant. On June 10, 1925, gave birth to a 20-pound female calf. The calf was fully developed but was dead when found by the herdsman.

Oestrous Cycle Ox Ex. No. 20

A three-year-old Jersey heifer that had never been pregnant and would not conceive. She came into heat irregularly and was thought to be pregnant several times. She was in heat and bred on February 3, November 17 and December 12, 1924. She was in heat again on February 2, 1925, but not bred. On February 20, or 18 days after her last heat, she was injected intravenously with one dose of oestrual hormone. On February 24 she was in heat and again on March 18, and was bred on the latter date.

On May 19 she was diagnosed pregnant.

Oestrous Cycle Ox Ex. No. 9

A four-year-old Holstein cow came to our attention June 27, 1924. She had her last calf on August 30, 1923, with considerable difficulty and following this she became very weak and developed a vaginal discharge which continued for some time. On February 21, 1924, she was diagnosed ready to breed and was bred on February 26. Following this service she developed catarrhal inflammation of the genitalia with some discharge but continued coming into heat regularly. She was in heat July 19, 1924, and examination showed all genitalia normal. On August 6, or 18 days after the last heat period, she was injected intravenously with one dose of oestrual hormone. On August 12 she was in heat again and on August 31, or 19 days after her last heat period, she received her second dose of oestrual hormone. She was in heat and bred on September 7, 1924. She conceived on this date, died from suffocation due to bloat on February 28, 1925, and on post mortem examination a male fetus measuring 55 c.m. crown rump measurement was found present in the uterus.

Poisonous Plants

L. H. Pammel, Dept. of Botany, Iowa State College

STOCK POISONING PLANTS OF OREGON

For some reason I overlooked an excellent paper by Professor William E. Lawrence, "The Principal Stock-Poisoning Plants of Oregon."* In reference to the extent of poisoning in Oregon he writes, as follows:

"The annual toll of the poisonous plants in Oregon is surprisingly heavy, and with the increase in livestock values the seriousness of these plants becomes greater. On the open range the loss from poisonous plants is much greater than that from infectious and contagious diseases. Losses from poisonous plants are also said to be much greater than those caused by predatory animals. There are no accurate data which can be cited regarding actual annual total losses. For the Western ranges it has been estimated by Marsh and others that larkspur frequently causes losses among individual herds of cattle up to 10 percent, death camas or lupine 50 or 60 percent, and loco from 5 to 50 percent. By far the greater number of losses are never reported."

He emphasizes further that every stockman should know, and I may add that every veterinarian should be familiar with the more important poisonous plants of his region. The author notes that young animals are more susceptible than older ones, and animals new to a locality are more likely to eat poisonous plants than are those familiar with the region. In this connection he writes, "It has often been observed that when a large number of animals have been feeding under apparently the same conditions a few will escape poisoning. This may be due to the individual differences in animals regarding their susceptibility. On the other hand the feeding habits of some animals, especially sheep, are erratic. Sheep are known to eat plants some days which they would not touch on others. This also applies to poisonous plants. Thus, when a few animals have become poisoned while others were not harmed, it may be safe to assume that only the few ate of the poisonous weeds."

In the early spring larkspur and death camas are likely to cause more trouble than later because they often come before good forage has had time to grow. This is illustrated in a recent item in The Stockton (California) Record of March 26, reporting the poisoning of many sheep near Sonora, that state, from which I take the following item:

"Poison weeds caused the death of twenty-nine sheep belonging to Wilbur McCormick a few days ago in the Peoria Flat section.

"An investigation of the pasture on which the

* Bull. Oregon Agr. College and Experiment Station 187, June, 1922.

flock was feeding at the time, made by federal veterinarians and County Horticultural Commissioner H. H. Sherrard, revealed the presence of poison parsnip and a species of death camas, and it is supposed that these noxious plants killed the animals.

"That Mr. McCormick did not lose a greater number is quite probably due to the prompt discovery of the dead animals and the immediate transfer of the flock to another area."

Professor Lawrence, in the Oregon bulletin, has an interesting suggestion to make regarding rotation of kinds of stock. "Areas infested with one kind of poisonous plant need not be lost to pasture, because during the danger period stock that are not likely to become poisoned may be put upon the ranges.

"Larkspur-infested areas may be grazed by sheep or horses through the larkspur-poisoning season; cattle and horses may be put in fields where death camas or lupine grows. This method is easier and more practical than an attempt to alter the range. The kind of plants found growing upon a range are presumably well suited to it so that the task of eradication is often difficult.

"Using non-susceptible animals on range tends to keep down the poisonous plants both because they may be eaten occasionally and because they may be tramped down. On the other hand, stock that avoid the poisonous plants will favor an increase in their abundance."

In Oregon there are two kinds of poisonous larkspur, the poison larkspur (Delphinium trolliifolium) and low larkspur (D. menziesii). "Most larkspur poisoning occurs among cattle. Horses, although susceptible, are seldom poisoned under range conditions. Sheep are scarcely if at all susceptible, and they may eat from two to five times as much as cattle without any harmful results. In fact, it is recommended that sheep be first grazed upon larkspur areas in order that the areas may become safe for cattle."

The author finds that although it is commonly believed that the root is the poisonous part yet feeding experiments have shown that the roots are not violently toxic. "The seeds are known to contain more of the poison than other parts of the plant. The seeds, however, are less likely to be eaten in the field and are probably not so important as the foliage."

There are two kinds of death camas in Oregon, the meadow death camas (Zygadenus venenosus) and foothill death camas (Zygadenus paniculatus). Horses are occasionally poisoned; the greatest loss occurs among sheep; horses are able to recover. "The heavy losses among sheep are due to the method of herding and to the fact that it takes but little of the plant to poison sheep because of their small size. If death camas is present sheep are apt to eat more of it when they are kept close together than when allowed to scatter out. Few sheep herders are acquainted with the plant or its poisonous qualities. Deaths among sheep frequently ascribed to other plants, such as the lupine, are often due to the death camas. Losses from death camas sometimes run up to 21 percent in a band."

The seeds are more toxic than the pods, flowers, leaves, bulbs or roots. They are about four times more poisonous than any other part of the plant.

The next important plant mentioned is the water-hemlock (Cicuta vagans). The author says, "The rootstocks of the water-hemlock are almost equally poisonous in all seasons of the year, except perhaps during the growing season when the amount of poison contained within the rootstock may be somewhat reduced. The early spring when the young shoots are still poisonous, is the most dangerous season."

The most important poisonous lupine is Lupinus macrostachys. "The conditions underlying the poisoning of sheep from lupines seem to be various. Poisoning is rather spasmodic, and not confined to any one time of the year or locality. Losses among sheep are very general, losses of several hundred being not at all uncommon and occasionally amounting to 50 percent of the band. Lupine is probably next to death camas in responsibility for sheep losses."

The loco weed of Oregon is Astragalus lentiginosus and it is a problem of the dry country. "Loco poisoning occurs from Central Oregon eastward through the desert and semi-desert sections. The number of animals poisoned varies in different years, depending upon the abundance of loco plants. On the other hand, the prevalence of loco will not accurately indicate the amount of poisoning, because animals after they have once acquired the taste for the loco develop the habit of eating it in preference to other plants even when not particularly abundant."

Another poisonous plant described is bracken or brake and he says of this: "Doctor B. T. Simms, Professor of Veterinary Medicine at the Oregon Agricultural College, describes the

symptoms and remedy of fern poisoning as follows:

"Not all the symptoms to be mentioned are necessarily to be seen in every case. The first thing noticed is usually a slight unsteadiness of gait. At this time appetite, temperature, and condition of the bowels are usually about normal. The respiration may be somewhat faster than is normal. As the disease progresses the affected animal shows a typical loss of control of the muscles. The gait is very unsteady. The animal may push forward or stand with the head pushing against the manger. There is frequently a drowsy appearance. There may be some difficulty in taking food into the mouth and in swallowing. The appetite usually remains fairly good until the symptoms are very marked. The temperature frequently remains about normal. There may be some costiveness, but the bowels are not disturbed in a very high percentage of the cases. From seven to fifteen or twenty days after symptoms first appear the affected animals may go down. Those that get down usually die a few days afterward."

Other minor poisonous plants are mentioned, as the laurel, mistletoe, rabbit brush, (Tetradymia glabrata), milkweed, horsetail.

This excellent bulletin should be in the hands of veterinarians.

The Rational Medication of Birds

B. F. Kaupp,* Raleigh, N. C.

In the medication of birds we have a problem quite different from that of the medication of live stock. In fact, the problems of rearing, handling, marketing and other matters in relation are so much different from those of live stock that the more progressive agricultural colleges have separated poultry from live stock, giving it a separate department or division as the college organization may require.

In this article an effort will be made to point out the most rational methods of attack of the problem of giving medicine to birds.

Do Not Drench Birds

In spite of the fact that the bird has no epiglottis, the glottis seems to close tightly during ordinary times in the act of deglutition, but when the bird is struggling the glottis may open at a time when you are pouring liquid down the throat, and thus I have seen more than one fatal attack of pneumonia or of bronchitis follow attempted drenching. The old method of medication of birds was by making dough balls; more modern methods saw this pass to the placing of the powdered drugs in capsules and dipping a capsule in water opening the bird's mouth and throwing the capsule back into the pharynx, watching the bird so that it does not throw the capsule out but swallows it. This has been very successful, or using the ink bag of a fountain pen passing a wire inside the tube so as to make a balling gun and inserting the capsule in the end of the rubber tube it will be found very easy to pass the capsule down the esophagus and push it out with the plunger. The most modern way is the making of a prescription into tablet form and giving a tablet to each bird. This is safe where the dosage must be large and close to the border line and, you might say, is not fool proof. It has been our experience that where medicine is not fool proof and it is given for mass medication, trouble may occur by careless use of the drugs and even fatalities result. Modern poultry husbandry means the keeping of two, three, four, or more thousand birds on the commercial farms where disease might appear and be of a serious character and so another method must be found than described above. This calls for mass treatment. By that I mean giving the medicine in the mash or in the drinking water so that each bird will get its amount and no more. To illustrate we will take the matter of medicating for intestinal parasites.

Medication for Intestinal Worms

We have found that one of the worst enemies of the poultry plant is that of intestinal worms. In autopsies of 500 adult fowls in these laboratories we have found that Heterakis papillosa infested 31.4% of the birds, tenia 12.8%, Ascaris inflexa 29.7%, Spiroptera hamulosa (gizzard worm) 19.1%, and other diseases of a parasitic nature included scaly legs 9%, lice 27.6%, and mites 1%. In performing autopsy we can expect to come across some form of intestinal parasites in almost every other bird if they are from different sources. The fact that the worm eggs live so long on contaminated premises, some of them as the Ascaris inflexa living for more than five years, makes the problem all

*Author Poultry Culture Sanitation and Hygiene, Essentials of Poultry Raising, Poultry Diseases, Anatomy of the Domestic Fowl, and Animal Parasites and Parasitic Diseases.

the more serious. How are you going to medicate 1,000 or more chickens?

Medicating the Commercial Flock

To do this job the medicine may be mixed with the drinking water. In the case of Epsom salts, the cathartic which is best adapted to poultry, it is dissolved in the drinking water. Poultry have a tendency toward constipation in their rather sedentary habits under the commercial factory method and salts (one-half pound to 100 birds) once a month keeps the eliminative organs open. Digestive troubles are the largest number of causes of deaths as we have shown in a survey of 500 complete autopsies on adult fowls where 22% were of the digestive tract, 15% septicemic (this high percentage is on account of the fact that fowl typhoid is common in our state and many fowls are sent in for diagnosis), glandular diseases 14%, and nervous 12%.

From these data it will be seen that those veterinarians who give attention to poultry diseases will be called upon pretty heavily for treatment for worms. When tape worms are present there should be given one grain of finely pulverized thymol to each bird and this can be mixed with the medicine for round worms. Nicotine is the best drug for round worms and may be given in the form of "Black leaf 40," using one ounce to the 100 hens. If flock medication is used then great care must be exercised to see that all birds eat at the same time so that one bird will not get an overdose for if the overdose be large enough it will constitute a lethal dose. All birds do not react the same to nicotine, some birds will stand a larger dose than others. To give this medicine, mix the blackleaf 40 with sufficient water to mix with mash so that each bird will have one ounce of mash. With this liquid add one-half pound Epsom salts to each 100 birds. When the mash wet with this mixture is given, it must be given in long troughs so that each bird can get to the trough at the same time. This blackleaf 40 can be put in capsules so that each bird can be given its exact dose, and the Epsom salts then may be given in the drinking water or may be mixed in a dry state with the mash. Use 6.6 c.c. of blackleaf 40 to 16 grams Lloyd's alkaloidal reagent. Mix and fill No. 2 gelatin capsules.

The Use of Iodin in Poultry Practice

Iodin is one of the most useful remedial agents in the materia medica for poultry practice. In abscesses of the feet, of the infraorbital sinuses and in other parts after the cheesy material has been removed, swab out the wound and cavity with pure iodin. Ulcerative stomatitis, pharyngitis and laryngitis (of the superior larynx) are quite common among poultry, much of it being due to the chicken pox organism. After the cheesy material has been scraped off, thoroughly swab the part with pure iodin. Repeat once a day. In ulcerative laryngitis affecting the superior larynx a curette is often needed to remove the small amount of cheesy inflammatory product that has accumulated at that point. Then swab the part.

Quite heroic treatment of roup or infectious nasal catarrh has been given by injecting pure iodin through the nasal cavity, also the application of pure iodin in case of chicken pox and painting the parts once a day in cases where a counter-irritant is indicated such as dermatitis and swellings of the face, comb, and wattles.

Finally iodin mixed with vaselin, or the so-called soluble iodin sold under the trade name Iodex, is useful in ulceration of the anus and cloaca commonly called vent gleet. Iodin is also used to disinfect the surface before an operation and of wounds.

BETTER POULTRY HASTENS IMPROVEMENT OF ALL STOCK

A total of 1,164,657 fowls—all breeding stock—are listed in a report just issued by the United States Department of Agriculture as undergoing improvement by the use of pure-bred male birds. The fowls consist principally of chickens, but include also turkeys, geese, ducks, guinea fowls, and pigeons. The report deals with the progress of the "Better Sires-Better Stock" campaign conducted by various states and the department for the improvement of domestic animals.

It is noticeable, however, that fowls outnumber other stock by more than 2 to 1. The number of cattle, horses, asses, swine, sheep, and goats totals slightly more than half a million as compared with considerably over a million fowls.

Department livestock specialists point out the educational effect which improved poultry has on the breeding of larger animals and cite examples in which a well-bred poultry flock was the means of causing the betterment of other animals on the same farms. Being prolific, poultry respond very quickly to good breeding practices, including the use of high-quality pure-bred males. The report shows also that the use of pure-bred sires in poultry breeding stock results in the ownership of more than ten times as many pure-bred female birds.

Splenectomy in Dogs and Cats

J. G. Horning D. V. M., and A. J. McKee, D. V. M., Houston, Texas

Our attention was first directed to this work in reading the Collected Papers of The Mayo Clinic Volume No. 9 published in 1917, by W. B. Saunders Company, containing some excellent articles by F. C. Mann and Della Drips, W. J. Mayo and D. C. Balfour. We were able to adopt its use in our practice with good results and recommend it for further study by the small animal practitioner.

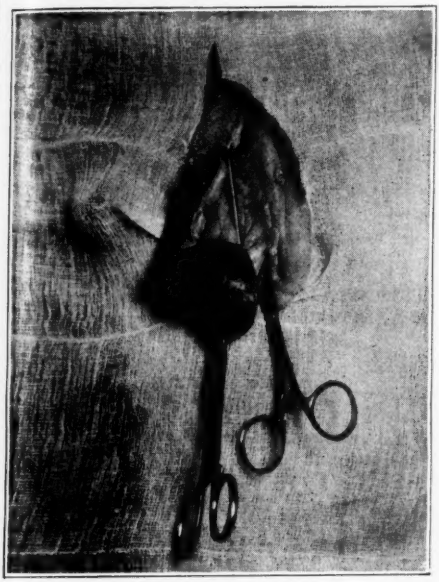


Fig. 1

We have operated on fifteen cases diagnosed as hemolytic icterus with good results in every case, on several cases so far advanced that there was slight chance of recovery. The owners were advised to this effect and did not care to have the operation performed. It is our intention to try it in cases of sore mouth accompanied by jaundice as well as other cases when presented and the operation is thought advisable. However, as it can be worked out more quickly by a number of small animal men over the country, we herewith present our technic of the operation with suggestions for the benefit of those interested.

Technic: The animal is anesthetized, after being placed on the table in the dorsal recumbent position, instruments sterilized and gauze placed over the field of operation as for our laparo-metro-oophorectomy described in a recent issue. A large incision is made into the abdominal cavity sufficient to allow the surgeon free inspection of the parts and room to work freely. The spleen is drawn downward, forward and outward, two pile clamps are placed below the base as in Fig. 1, amputation is then made below the upper forceps and iron dyed linen thread is used to tie off the remaining stump of blood vessels and tissues by running a needle with thread through the center and tying off one side and repeating for the other side as in Fig. 2. The excess thread is then cut, parts replaced and wound closed with No. 2 chromic catgut for the peritoneum and muscle, using an interrupted suture and 4 m.m. bites 8 m.m. apart, and the skin sewed with iron dyed linen thread, using 1 m.m. bites and placing the interrupted sutures 4 m.m. apart.

Suggestions: It would be advisable to try this operation on any case of jaundice that fails to respond to other methods. In cases of chronic anemia where palpation reveals an enlarged spleen it should also prove of benefit.

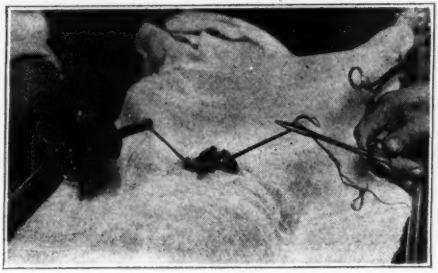


Fig. 2

According to Chittenden, Underhill and Goldberger, black tongue is a disease similar, if not identical, to pellagra in the human. Black tongue occurs spontaneously in dogs in practically all the states in the southern portion of our country. It has been found that carrots and butterfat protect against the development of pellagra, and probably also black tongue in dogs. Just what the preventive agent is in carrots and butterfat has not been determined.

Shinnery Poisoning

By A. T. Kinsley

Reports of poisoning of cattle that have had access to scrub oak in early spring, have been received from various localities in Kansas, Oklahoma, Texas, New Mexico and Utah. These reports indicate that poisoning by oak leaves is not at all uncommon and that losses in some pastures may exceed 2 or 3 per cent. Two species of oak thus far have been found capable of producing poisoning. One is a scrub oak that occurs in Utah and perhaps portions of Colorado and New Mexico, and the other occurs in Texas, New Mexico and Oklahoma. The type of oak found in the last three named states is commonly known as "shinnery," and the poisonous effects from this species is designated "shinnery poisoning." The present discussion is confined to disturbance induced by the shinnery oak.

The first outbreak of shinnery poisoning investigated by the writer was of some 4000 three-year-old steers shipped from Western Texas to the flint hills in Southeastern Kansas for summer pasturing. Three or four days after this shipment of cattle arrived at the Kansas pastures, the caretaker noticed there were several sick and a few dead. This fact was reported to the owner who promptly ordered an investigation. Of this lot, over one hundred had died within the first ten days after arrival at the Kansas pasture, several were extensively affected and probably died later.

A recent outbreak was investigated in Southeastern Kansas, in which about 600 head of steers were shipped from Oklahoma to Kansas grass land. Within twelve days after arrival of this shipment, thirty head had died and some 35 or 40 others were affected, the majority of which probably died.

Causes of Poisoning

The poisonous principle of the oak leaves and buds has been positively identified. It may be in some way related to tannin, variable quantities of which occur in buds and leaves of the poisonous oak. Poisoning is apparently most common in spring as the oak buds and leaves are available in most localities before grass. The quantity necessary of oak buds and leaves for animals to consume before showing symptoms of poisoning vary, at least according to feeding experiments. In some instances it seems that a small quantity of the buds or leaves suffices to produce notable symptoms and even death. In other instances, cattle appear to browse on the buds and leaves for a long period without any noticeable injurious effect. The poisoning most frequently reported occurs in cattle that are wintered in shinnery areas and changed in early spring to grass land in other states. Thus, shinnery poisoning may occur at a considerable distance from the areas in which the poisonous oak trees are found.

It is possible that the intensity of the poisoning in the buds and leaves may vary under different climatic and soil conditions; at least, poisoning is apparently more prevalent some seasons than others. No doubt, the condition of the animal is also a factor in the occurrence of this condition.

Symptoms of Oak Poisoning

The usual symptoms of oak poisoning in the beginning are constipation, increased thirst, sunken eyes, extension of the head, dry, cracked muzzle, rough coat, and usually a peculiar gait. Affected animals are usually found around water holes because of the increased thirst. If the animals survive for four or five days, the fecal matter will be mixed with blood streaked mucus. In the latter stages there may be diarrhea. Throughout the course of the disease, the temperature rarely exceeds normal, but may be subnormal; respiration may be slightly increased, and usually the pulse is weak and rapid. A large percentage of affected animals die regardless of treatment and the course of the disease is apparently variable, probably depending upon the amount of buds and leaves consumed.

Autopsy Findings

Animals dead of shinnery poisoning are usually extremely gaunt and if the course of the disease was relatively long, there will be marked emaciation. The carcass is anemic; there may be accumulation of serous fluid in the body cavities. In some instances, petechial hemorrhages are observed on the epicardium and pericardium. The kidneys may or may not be tumefied, and show a tubular nephritis. The principal lesions are found in the digestive tract and consist of congestion, inflammation and hemorrhages of the mucosa of the abomasum and intestine. The extent of the lesions vary but the condition is essentially a gastro-enteritis, indicating that the active poisonous principle is an irritant. In some advanced cases, there will be necrosis of the superficial mucosa of either the abomasum

or intestine. In other instances there will be hemolysis and occurrence of hemoglobins in the urine, this condition being found only in the extreme cases.

These findings may confuse the veterinarian leading him to suspect either hemorrhagic septicemia or arsenical poisoning, but a differential diagnosis can usually be made by a careful consideration of the history. If there is any doubt, laboratory examination will suffice to make a positive diagnosis. Thus far, no line of treatment has been found that is of any particular value in relieving the sick. This condition can usually be prevented by providing other feed, so the animal will consume only a small quantity of the buds and leaves of the poisonous oak. Some ranchmen have prevented losses by giving small quantities of cottonseed once daily in the lot during the season when poisoning is most prone to occur.

Veterinary Medicine will be glad to receive reports from veterinarians who have had experience in this paricular malady.

A Week's Practice in Connecticut*

J. J. Kavanek, D. V. M., Hartford, Conn.

This is just a brief review of a week's work and play in my practice in Hartford and surrounding towns, and as it contains a couple of quite interesting cases I thought you might enjoy such a paper.

In the first place, business is quite good, thank you, as is the play part, because it is an idea of mine that as concerns myself, if I have a little play with quite a lot of work I enjoy life better, can better tolerate the failings of myself and fellow men and women, and make a much better husband and father, besides having a much more optimistic outlook on life in general, and that of course keeps your digestion good and your cases get along better.

This report starts on Friday, April 10, 1925. The first call on the docket in the morning is a case near Poquonock. I find my patient a horse in very bad shape—head hanging to the floor and respiration very loud and fast at times. Then he would forget to breathe altogether—a comatose condition—all at once a very violent period of thrashing. Heavy ropes and chains barely kept the horse in the stall. I decided it was hopeless, so shot him. I saw this case two days before—horse leaning up against stall bodily—temperature 104.4—pulse fast and full—head hanging to the left—gave a hypo of strychnin one grain and physic ball. The next day it was a lot better—standing natural—eating little—slight twist to the head. Then third day events as listed above. What was it?

Next a call to Newington—a Pekinese dog goes through a barb wire fence—forgot to tuck up his abdomen, hence a large rent through skin—sewed this up. Then to the barn and opened a teat that had been stepped on.

My next call was to Wethersfield Avenue to see a horse I had treated before—coming good.

Next to a coal horse on Enfield Street—find a case of impaction—gave a physic ball—left 60 grain nux tablets to be given—recovery O. K.

Then a call to Canton Centre to apply mallein test to horse with ulcerated tooth, but owner thought it glanders, this ending Friday the 10th.

Early on the 11th to Canton Centre—make my ophthalmic mallein test reading—no glanders—owner feels better and so do I—I do not like glanders myself.

I then go to Prospect Avenue to see a horse—a peculiar case—facial paralysis including tongue—could swallow but could not eat nor drink, due to tongue hanging out about four inches—gave one grain strychnin—left solution of strychnin—one grain to ounce of water given every four hours for four doses—then three times daily with a syringe way back on base of tongue.

Then to above with a hole in his shoulder about six inches deep back of shoulder joint—syringe out with Dakin's solution.

Next to Lincoln Street—a repeat case of suppurative corn—coming all right.

My next case is to Windsor—fouls, and foot rot in cow—scrape and clean—put on bran poultice. Calling this a fair forenoon's work, I hurry home, eat dinner, kiss the kids and grab up my trusty Remington and go out to the Hartford Gun Club—feel pretty keen so smash ninety-one clay pigeons out of one hundred, and take high gun for the shoot. Of course, this helps keep my spirits up and consequently things look good. No evening calls at all, so sleep all night.

Sunday a. m.—a call to Wethersfield—a mul-

* Paper presented at meeting of Connecticut Veterinary Medical Association, May 6, 1925.

titude of work. This man never was known to have only one patient to look at, nearer a dozen always. This time is no exception. First, a cow stepped on teat—clip off the end of that. Then comes a heifer with the biggest mess of warts I have ever seen. It must have weighed nearly six pounds—just anterior and lateral to the udder. So I take a heavy elastic band, cut it and wind it tightly around the large neck and tell him to leave it alone. He looks at me rather queer but sees I mean it so says nothing. Later reports show the wart lasted three days, then gave up the ghost and fell to earth,—no hemorrhage, no operating at all. Then, his horse has a bad case of thrush, so I pack that with calomel and tell him to repeat in three days—which will be the end of Mr. Thrush for quite some time. By that time he thinks I have earned my four dollars so lets me depart.

On my way back I stop to see a dog that has been wormed nearly to death—pains and crying —gastritis, etc.—copious doses of bismuth with a little soda—20 grains and 5, respectively, in a little olive oil—hypo of morphin—that's that. I don't know how this case came out. I never heard.

I then go to see my Wethersfield Avenue distemper horse. Discharge case and that winds up Sunday morning. In the afternoon I take the kids out for a ride. This ends Sunday.

Monday morning early—hurry call inverted uterus—quite a case to get up an appetite for breakfast—reduced that uterus, apply rope truss and kill a good meal.

Then, a call to see my foot rot sow in Windsor—take off poultice—clean out and scrape out —apply dichloramine-T. in chlorocacane, and leave some. That case came out good.

Next, one of my clients, Miss S., from Wethersfield, brings over a big white tom turkey—he won't stand. I feel him all over—everything seems all right, only his feet feel hot and sore if squeezed. So I look close—find the interdigital pads hot and swollen. I tell my client to go home and apply a flaxseed poultice to the flesh. I hear he is all right now.

In the afternoon I see a registered Guernsey calf—bloated badly so owner said. He was. Also, he was so near dead, I didn't even bother to offer treatment. He died inside of fifteen minutes.

My next case is to Newington to see a cow with pneumonia (one of my cash customers because his credit is no good). It was pneumonia, but was primarily a case of subacute hemorrhagic septicemia. Having no H. S. serum I have to make a repeat case—give 200 c.c. H. S. serum—spirits of nitric ether, tincture of gentian and spirits of Mindererus compound. This man lost two cows about a year and a half ago, so I told him to vaccinate at least once yearly. But they don't always take good advice, especially if it costs money.

After supper I got a town call for a case of colic, but the horse must have heard I was coming, because he had forgotten all about abdominal pains by the time I got there and was eating hay and enjoying it. I want to mention that I never weep when I get a colic case and find it O. K. when I arrive.

About nine o'clock my client with the distemper horse calls me and says, "Doc, I guess I did something. Come down and see if you can undo it." So down I go, and find my patient, the horse, puffing for dear life—temperature 106—quivery muscles—general depression. The owner says, "He felt so good, I took him out to walk him about a bit. One of my men called me out to West Hartford, so I tied the horse outside, intending to be gone only about twenty minutes." Well, he was gone three hours. It was nearly night and a cold wind blew up. He had taken off the blanket to walk him around. I said to him, "I'm afraid we are about stumped now." But he said, "Well, never mind, Doctor, do what you can, I know it is my fault. I'm going to hurry in and send Honce a check, because I don't like to pay for a dead horse." This ends Monday, April 13th.

April 14th I go down to see my horse of the night before, but find he has just passed out. My client laughs and says, "I mailed that check last night. It cost me $250.00 to find out you don't want to forget things, but I guess I can stand it."

Next on the docket is a call to Windsor Avenue—teat stepped on—clip that off, and while there my wife tells me to go to Wilson Station. Generally they wait until I get clear home or the other end of my territory before they call me. So I go out to Wilson Station. A cow has calved all proper but can't get up—no milk fever, so it must be post-partum paralysis—so leave 60 grains nux tablets—given two or three times daily, and turn her twice daily. She got up in a couple of days.

Then, to Prospect Avenue to see horse with paralyzed face. Find him thin as a June shad—eating a little very slowly, but unable to drink—no suction—tongue did not protrude—fact straight. Took a lard tub full of water—little grain in bottom—got away with considerable

water—made a grand recovery—working today.

Then, to Park Street, to see a dog that a year ago Dr. Corwin and I had performed a cesarean on—eyes very sore and suppurating—appetite good—so is general condition—call it conjunctivitis—wash out with warm water—apply 15 per cent argyrol—leave some and dropper—three times daily.

Next, to Rocky Hill—second hand case of milk fever—general infection of udder and systemic reactions as well. Tell owner we are very sorry but such things happen to the best regulated veterinarians (although this case was treated by a non-graduate). We also tell Mr. Owner his cow will cease to function in about twenty-four hours, or less. It was less.

On my way home I make a call to Wethersfield (three cheers again for not allowing me to get way home). First, a cat has too many testicles, so removed a couple of them. Then, a cow wanted talking about—didn't breed—so give the owner a little advice, also some advice about feeding a calf. Went home and took the Mrs. to the Capitol Theater. Thus, we disposed of Tuesday, April 14th, 1925.

Wednesday, April 15th, I made a call in West Hartford to examine a pair of horses for soundness, which is an easy case usually, especially on green horses.

Made a repeat call to see my cow with hemorrhagic septicemia—no better and no worse—gave 100 c.c. serum, etc., and told him to call if she died, as I wanted to hold a postmortem. I have not heard from him, so conclude she still lives.

My next job is one that a blacksmith should have been called on—a cow kept on soft footing until hoofs were so long they pointed toward her belly. A good sharp two-inch wood chisel and a three-pound hammer soon shortened the turned-up members, although that is rather a ticklish proposition, owing to Madam Cow not taking kindly to the pounding, and I always watch that chisel for fear she will give it a kick.

Next comes a case of colic at our ice company—one of those simple kinds that respond readily.

My next was a setter bitch with nervous form of distemper, having a fit about every ten minutes—advised destruction of this animal, although it hurts me to see a good setter take the long trail. It is a funny thing, the mutts and useless breeds one sees will get well or never take it.

Then, last for today, another case of canine distemper. The animal had been to one of our local hospitals for indigestion about five days previous—gave 30 c.c. Pitman-Moore serum and left my one and only remedy for distemper which is probably as good as any there is—no better than others. Anyhow, this purp got well, following about a week's sickness and three more copious subcutaneous drenchings of Pitman-Moore serum. I like serum and use it in heavy doses. Thus endeth Wednesday, the 15th.

Thursday, April 16th—that telephone just absolutely forgot to ring, so after breakfast, having nothing better to do, I started spading flower beds, and in spading I turned up the nicest, fattest angle worms. As I hate the thought of worms without going fishing, I began putting them in my coat pocket until I had quite a batch. After dinner I said to Mrs. Kavanek, "I think I'll go fishing." So I went out to a little brook and found that occupied, so came back and went to Avon where I caught thirteen of the nicest trout I have ever caught or seen since I was a kid, and trout were plentiful then. I won't bother to tell you how long they were because you wouldn't believe me anyhow, even if I did. But I came home happy and receiving several compliments from the Mrs. and grudging admiration from three fishermen I had the good luck to see. Went to bed at 11:30, but got a rush call to Farmington Avenue—dog tried to stop an auto—came out second best—leg broken in forty places—hurry. On arrival found Airedale pup feeling a great deal worse in his imagination than he was physically—no broken bones to be located without X-ray, which I don't possess—gave one-fourth grain morphin, so he and the family could all sleep. Saw this dog several days later and he was improving slowly.

This ends the week of seven days of my business in Hartford. I had a fair week's work—nothing large about it—had a good one-half day's outing at the Gun Club—caught a dandy string of trout—the family are all well. What more could any veterinarian ask for? Thank you.

Less than one-half of a pound of radium valued at over thirty million dollars has been produced since Madam Curie discovered this element in 1898. Dr. Viol, director of the radium research laboratory of the Standard Chemical Co., has demonstrated that radon is continuously being formed from radium. Radon is 160,000 times more active than radium; however, it loses 50 per cent of its activity in about four days.

Items of Interest to the Practitioner

By A. T. Kinsley

A typhoid fever epidemic was recently traced to cheese made from milk that had been handled by typhoid carriers.

Of 2409 autopsies on poultry during the past six years, only two cases of goiter were observed according to Kernkamp of Minnesota Experiment Station.

According to the records of the American Hay Fever Association, victims of this malady in the United States number over a million and the disease is gradually increasing.

Cows affected with cystic ovaries as a rule are non-breeders and unless successfully treated will remain so.—Boyd.

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115 cars, or 500,000 lbs. of turkeys were shipped out of Kentucky in 1923. The most common destructive disease of those birds in Kentucky and other states is blackhead.

Less than one per cent of eggs from tuberculous fowls contain living tubercle bacteria.—Fitch.

The production of wool is usually at the maximum when sheep are one year of age.

The ordinary cooking of foods for either human or animal consumption diminishes the mineral content. Steam cooking removes less of the minerals than other forms of cooking and should be resorted to when possible.

Egg production usually decreases with the age of hens. It is therefore advisable to band all pullets or use some other means in keeping a record of age of the individuals of the laying flock.

At least three square feet of floor space should be provided for hens and four square feet is better for the larger breeds.

A type of pernicious anemia due to a filtrable virus has been observed in sheep and goats in Algeria. The principal lesions are found in the suprarenal capsules.

Milk exposed to ultra-violet rays for two hours has been successfully used in the treatment of rickets in children. The light treated milk is said to be as effective in relieving rachitic conditions as codliver oil.

Will artificial fertilizer exert the same influence as natural manure on the production and storage of vitamins in food plants?

Dutcher, Francis and Combs, by carefully conducted feeding experiments of rats, demonstrated that the evaporation of milk by the air blast and vacuum methods does not destroy vitamin B; at least to a determinable extent. However, sterilization of milk by the air blast method did apparently destroy a portion of vitamin B.

To effectively eradicate tuberculosis, all cattle should be destroyed in herds in which 50 per cent or more react.

Birds have a sense of taste similar to that of human beings, according to Ransch. It was found that solutions that were sweet produced a positive sense of pleasure. Their sense of bitter taste, also of salty taste, was not as acute as in the human.

Police measures should be gradually invoked to prevent the traffic in recent aborters, as the most fertile source of the spread of bovine infectious abortion is the animal which has recently aborted, and her sale should be prevented by law.—Fitch.

There is a general movement among health boards and others interested in public health, looking toward the enactment of a federal statute requiring the iodization of all table salt sold in the United States, thereby insuring uniformity of product and the restoring of one of the most common ingredients of salt in the prevention of goiter in the human.

According to Graham and Boughton, white snake root poisoning is a disease of cattle, horses and sheep, called "trembles." This weed is relatively common in wooded pastures in Illinois and surrounding states.

Dr. H. R. Thompson of Kansas City, Mo., has reported the finding of an interesting condition in the form of fibrinous pericarditis in fat cattle arriving at market centers. The interesting question in these cases is the length of standing of the condition. In many instances, shipments of cattle are insured. Such cattle are enroute from twelve to thirty-six hours, and the question involved concerning the insurance is whether or not the animals are healthy at the time of loading. In other words, will a marked fibrinous or even purulent pericarditis develop within from twelve to thirty-six hours?

Immunity Against Canine Distemper, a Report of the Development of a New Immunizing Agent of High Efficiency

Ashe Lockhart, J. D. Ray, and J. S. Barbee, Kinsley Laboratories, Kansas City, Mo.

Canine distemper needs no introduction. It has been for generations the worst plague of canines and causes more grief for the small animal practitioner, kennel man, dog fancier, sportsman and fox raiser than any other disease.

For a number of years the authors have been engaged in experimental work, dealing with the cause and prevention of this disease. During our studies a large amount of data has been accumulated and in this report no attempt is made to give the details of the work done.

During the course of our experiments an agent has been discovered which has been given the name Sero-Toxylin, and it is with this substance that this report deals. Sero-Toxylin is a new agent, being prepared from dogs, and consisting of two injections administered simultaneously.

Experiments have been carried out on an extensive scale to determine the true value and usefulness of Sero-Toxylin as a preventive against canine distemper, and a brief description of the experiments and results follows:

Early in this work it was found that the age of the dog had considerable influence on the results obtained in attempted immunization; consequently, the dogs of the experiment were divided into those more than three months old and those less than three months old.

Part I

Dogs More Than Three Months Old

In this experiment, thirteen groups of dogs containing a total of 258 dogs between the ages of three and ten months were obtained. All of these dogs were thought to be susceptible to distemper. This experiment was begun in September, 1924, and has continued until the present time, June 1st, 1925. Injections were all made prior to Feb. 1st, 1925.

Method of Performing Experiment

When a group of dogs was obtained, approximately two-thirds were injected with Sero-Toxylin and one-third were left as controls. The dogs were injected as soon as possible after being received. Both the controls and treated dogs were placed in direct contact with dogs sick of canine distemper, the length of enforced exposure varying from a few days to several weeks and in some cases several months. **The following is a summary of the results of this experiment**

	Number of dogs	No. which remained healthy after exposure	No. which developed distemper after exposure
Treated dogs	166	163	3
Control dogs	92	11	81

From the above it will be seen that 88+ per cent of the controls developed distemper, whereas only 1-8/10 per cent of the treated dogs showed evidence of the disease. All dogs, both treated and controls, were observed for at least four months after exposure.

Duration of Immunity

Observations on a number of the above dogs, have extended over a period of nine months, and they still resist exposure, consequently, the immunity should be considered as being permanent.

Part II

Dogs Less Than Three Months Old

Experiments were conducted on five groups of puppies less than three months of age. The work was done in exactly the same manner as the above.

	Number of pups	No. which remained healthy after exposure	No. which developed distemper after exposure
Treated pups	39	24	15
Control pups	26	0	26

From this, it is seen that only 61.5% of the treated puppies were protected against distemper when treated before three months of age. However, it was observed that the disease did not appear in less than a month after treatment, whereas the controls developed the disease in from 10 to 15 days after exposure. Consequently, an additional experiment was conducted the same as the above, except that the treatment was repeated one month after the first injection. Where this was done approximately 90% of the treated puppies remained healthy throughout the experiment.

Part III
Use of Sero-Toxylin in Kennels Where Distemper is Present

While conducting the above experiments an opportunity was presented to test Sero-Toxylin in three kennels where a number of cases of distemper were present at the time of treatment, and where it was reasonable to suppose that all dogs were exposed before treatment. Only young dogs, of distemper age, were included in those observations. A total of 35 young dogs were treated, 16 being left as controls. There were 20 cases of distemper in the three kennels at the time of treatment. Of the 35 treated dogs, 4 developed distemper, all four showing symptoms of the disease within ten days after the treatment, and of the sixteen controls 14 developed distemper.

From this it will be seen that the progress of the outbreak was checked in the treated dogs, whereas it continued in the controls.

All of the above experiments were conducted prior to Feb. 1, 1925. Since that time several hundred additional dogs have been treated, and up to this time the results are practically the same as those given above.

Use in Foxes

Investigations in this field have not been extensive but it seems that the agent is equally as effective in foxes as in dogs.

Has No Curative Value

A number of cases of distemper of the various forms were treated with Sero-Toxylin without apparently influencing the course of the disease, consequently, at this time it should be said that the agent has little or no curative value.

Conclusions

1. Sero-Toxylin is a reliable immunizing agent, producing an immunity of long duration.
2. When it is necessary to treat puppies less than three months old, the treatment should be repeated in one month.
3. Sero-Toxylin is best used in unexposed dogs, but produces satisfactory results when used to combat the progress of a distemper outbreak in kennels where a part of the dogs are sick at the time of treatment.

PARASITES AND PARASITIC DISEASES OF DOGS

Next to distemper and mange, worm infestations, especially roundworm and hookworm, are the most prevalent disorders among dogs. They are particularly prevalent and deadly in puppyhood and most so in tropical and subtropical countries, although by no means unimportant in temperate climates.

In a new publication, Department Circular 338, just issued, the United States Department of Agriculture presents in concise form what it knows of the parasites and parasitic diseases of dogs. Of the large number of worm parasites such as hookworms and roundworms, and of external parasites, such as fleas, lice and ticks, reported from dogs, only a few of the more important ones are discussed.

The importance of these parasites, says the department, is heightened by the fact that a number of them are transmissible in some form to man and to livestock. Some that occur as adults in the digestive tract of the dog are found in the same form and in the same place in man also. Others occur as adult worms in dogs and as larval worms in man and livestock. Control is therefore necessary not only for the sake of the dog but for human health and the welfare of the livestock industry.

Copies of the circular may be had by writing to the United States Department of Agriculture, Washington, D. C., as long as the supply lasts.

During the recent spring there has appeared throughout central and southwestern Texas an unprecedented outbreak of the sticktight flea. The loss has been especially severe among young chicks, resulting in a scarcity of fryers on many markets. Egg production has also been severely cut, the reduction ranging from 5 to more than 50 per cent. The total loss this spring is estimated at over $1,000,000, according to the Bureau of Entomology of the United States Department of Agriculture.

CASE REPORTS

CESAREAN SECTION IN A COW

This is a report of a part of the work of the average country practitioner which does not present itself in the every day routine and is an exception to the general rule of work.

On May 27th I was asked to come out and

Showing site of operation on the eighth day following operation.

bring all that was necessary to deliver a cow that needed attention. On arriving I found a grade Holstein cow, eight years old, weight about 1,000 pounds, in fair flesh, eyes sunken, no labor pains, dejected appearance, quite stiff in the hind parts, dragging the hind legs rather than walking, pulse 96, temperature 102.5° F., and reported as having no appetite. I was also informed that about two weeks before when her time was up, the cow was in labor, and "we thought she would do all right, but she hain't."

Examination revealed torsion of the uterus with considerable congestion of the parts and with the fetus firmly fixed in utero. In manipulating for position for delivery, I became convinced that this case was beyond normal conditions, so advised cesarean section. So with the help of two men available, who when the operation was spoken of said, "It cain't be did, but we will do whatever you tell us to," we proceeded.

A place was selected in a pasture field close at hand on a slope of about 20 per cent with a tree for anchor post, where the patient was cast with a side line on the left side. Procain solution was used for local anesthesia. The seat of operation was shaved and scrubbed with soap and water, after which the parts were bathed in a solution of iodin. The patient by this time had the proper amount of drag on the anchor and was adjusted in proper decubitis, so the right hind leg was fixed to a rope with one of the helpers to keep it reasonably quiet.

An incision was made in the right flank from above downwards twelve inches long, exposing the womb. Hemorrhage was controlled with cold compress and forceps. The head and neck of the fetus were located and an incision made in the superior portion of the uterus, which in this case was in the left horn, about fourteen inches long. There were no fluids left owing to the elapsed time. The sides of the uterus were sutured to the skin, and using some Nujol for lubrication of the fetus, by a good deal of manipulating, I delivered a normal fetus, membranes in situ, which gave evidence of having been dead for about ten days.

After a thorough sponging of the uterus with a 1-1000 solution of bichlorid of mercury, it was sutured with uninterrupted sutures, the edges folded in. The parts were replaced and the peritoneum sutured with interrupted sutures, then the womb sponged with a 1-1000 solution

Six smaller reasons why the owner needs the use of the cow.

of mercury, and the muscles sutured with interrupted sutures and bathed with a solution of iodin. The integument was sutured with eight interrupted sutures of Irish linen, the parts bathed in cresylic acid solution, applied a coat-

ing of boracic acid and covered well with Pinex.

On removing the restraint, the patient immediately arose and began to pay attention to the calf, dividing her time with a bucket of water. One-half ounce of nux vomica was administered and instructions given to administer the same dose every eight hours, also to see that the animal had an abundance of water at hand at all times, and if she was down too long at any time to have her moved about.

In twenty-four hours the patient was ruminating, going to water and showing a real interest in her daily occupation of manufacturing milk. The accompanying photos were made at seven days showing the wound site and the patient feeding. The wound shows no infection, wasting is normal and the patient has a normal gait. One of the pictures shows six of the smaller reasons why the owner of the cow desires to keep her.

D. C. Snow

Athens, Ohio

ATYPICAL CASE OF MILK FEVER

Having read several case reports on milk fever, each being different either in symptoms or treatment, I wish to report another slight variation.

I was called about 7:30 p. m. by a farmer several miles out. On arrival I found the cow down, unable to rise, the hind legs sore and stiff. After questioning the owner several minutes, I found the cow had been milking for several months and that she was due to calve in thirty days. Some of the dairy herd had foot rot but not bad. So did this particular cow. Her temperature and pulse were normal, but the head was not held in the usual position, lying around on the shoulder.

I was somewhat puzzled as to what to do, but knowing I must do something and do it quickly, I decided to inflate the udder, take no chances and treat symptoms pure and simple. So I advised the farmer to poultice each hind foot of the animal, rub liniment on the sore legs, and give every two hours some medicine which I would leave. The medicine was not harmful, for it was only colored water.

I returned in the morning and found the cow up and chewing her cud. I advised a good physic of Epsom salts and a restricted diet for a few days.

I have heard of milk fever coming on cows at almost any time, but never before came across a case such as this.

M. F. Wilkinson

Utica, N. Y.

TEAT SURGERY

I read Doctor Sillick's report in the June issue, and as I have used his method of plugs of violin strings, also used matches with the burned surface still fresh, and consider my present method far superior to either, I am reporting it with the hope that it may be of benefit to some other practitioners.

Taking care of so-called spiders, enlargements and injuries at the end of the teat with the subsequent hard milking, has been to me very difficult and unsatisfactory. In past years I have operated on them with all the common curettes and have used several types of teat plugs, including violin strings, wax, metal and freshly burned matches, with the result that 75% to 90% did not do well, and in many cases there resulted a badly infected quarter.

During the past two years, I have been handling these cases in the following manner. Regardless of whether injury or spider is at the very end of the teat in the form of a scab or extends up the teat for an inch or more ending in a hard lump, I cast the cow, if possible with the teat to be operated on uppermost. I stand astraddle the hind legs and udder with my back toward the back of the cow. This puts the operator in a safe position. I then wash and disinfect the quarter and teat, following this with the application of iodin over the end of the teat. After the field is ready, I take a very sharp knife and cut down into the teat from the end following the teat canal. I make two incisions, one at right angles to the other, continuing to cut until the milk can be obtained by ordinary milking methods quite freely.

The precaution I use is not to cut up the teat canal farther than the point where the milk can be obtained freely. This is to avoid a leaky teat when healed. The after treatment consists of having the caretaker soak the end of the cow's teat in a mild antiseptic solution for a few minutes before milking for a few times.

I find that cows having badly infected quarters with broken down udder tissue will respond to this treatment in that the quarter will dry up quickly leaving a useful three-teated cow. In these latter cases, the incisions must be carried well above the obstruction so that the broken down tissue can be milked out. I have cut the end of the teat off in many of these cases, but find by so doing that the milk leaks out all the time and is a constant source of infection for the other quarters of the udder as well as the other cows in the stable.

I am not presenting this treatment as some-

thing new, for it may have been used by many others, although I have never heard or read of it. I can say that results are near the 100 per cent mark, and that is many times better than any other method I have ever used. Try it on your next case.

J. F. Kane

Goshen, N. Y.

EXTENSIVE BURNS ON A ZEBU BULL

This bull was practically useless for the purpose for which he was wanted, i. e., serving cows and getting calves. The owner consulted me, and I suggested working the animal on the plough or cart. Cattle are still used for ploughing and draft purposes in these islands.

The trouble was to get the animal secured. Although the bull was perfectly quiet in the herd and the herdsman could go up and scratch him all over the body, yet to go near him with a rope would be courting death. The animal was a fine specimen, and the owner wanted if possible to get some more calves, as he had a couple and they looked promising, so it was decided the animal must go to work. I did not see the operations of catching this monarch, but I heard they were very interesting. I can imagine the scene.

However, he was secured against a steady old one and carried to learn his business. But like Peck's bad boy he thought he was too old to learn to work, so he lay down and refused to move. All the coaxing and prodding from his darkies (drivers) failed to arouse his attention, and the poor fellows thought a little fire might awaken him from his reverie, so they collected some rubbish and put a match to it. But that bull was determined to have "liberty or death" and refused to budge. As the drivers thought or rather saw that the bull preferred death to work, they put the fire out, fearing the animal would be roasted alive. But the damage had already been done. He was unyoked, walked home alone and went to lie down under a tree.

He was burnt on the dewlap, scrotum, inside and outside of the thighs, and, of course, on part of his tail. I did not see him until the following morning. A dog would have sympathized with him. I really did not keep a record of his daily progress, etc., but suffice it to say, that he was given alcoholic stimulants, four ounces in water every four hours to ward off the shock, fluid extract of belladonna, one-dram doses, to relieve pain, and chloral. Potassium nitrate was given as a diuretic and febrifuge, two drams three times a day. Carron oil, vaselin, etc., i. e., antiseptic lotions, were applied to the parts where the skin sloughed, followed with dusting powder of iodoform, one dram, boric acid, four drams, alum, one-half ounce, zinc oxid, two drams, and amylum, two ounces. The symptoms were treated as they arose. On several occasions I thought the fellow was going west, but he recovered.

Now, the interesting part is this. The skin of the scrotum sloughed, and the cicatrix contracted to such an extent as to make the animal appear like an ox instead of a bull, i. e., the testicles could hardly be seen. I told the owner that in my opinion the bull's generative organs were irreparably damaged. But to every one's surprise, after the animal recovered, he went back to the herd and did his duty and got calves for several years. No further attempts were made to work him. This happened many years ago, soon after I graduated.

Ernest F. Jardine, V. S.
Government Veterinary Surgeon
Basseterre, St. Kitts, British West Indies

PARALYSIS IN A COW

On May 4th, about 7:30 p. m., I was called to see a cow that was down, and the owner was greatly excited as he thought he was about to lose his source of milk and butter, which was one of his main assets. I was informed that the cow seemed just a bit off in the morning and fell short in her milk supply, but she was turned into the pasture and not seen again until milking time in the evening, when she was found down, unable to rise.

The animal was still down when I arrived, but as we approached, she made an effort to rise but failed. Examination failed to show any injuries. The patient's eyes were bright, and there was no evidence of pain or distress. There was a thin brownish discharge from the bowels with an offensive odor. The udder was flabby and contained very little milk. Temperature 102° F., respiration about normal. The cow did not have any calf and was not due to freshen until August.

Unable to make a positive diagnosis, I inflated the udder and gave a dose of mucoseptone, leaving word to be called at seven o'clock next morning.

The owner called me promptly at seven and said the cow was still down and he could see no improvement. I told him to remove the tape from the teats and I would come out and see

the patient again. When I called about an hour later, the cow was up in a lot near the barn. The owner said that when he went to follow my instructions, the cow got up and walked to the barn lot. Passages from the bowels of the animal were very thin by this time, but the odor was not so noticeable. I prescribed one pint castor oil followed with mucoseptone at three-hour intervals. The patient is doing well at present.

What was it? This cow was in a bluegrass pasture where there were no other animals except the family mare.

H. E. Mulkey

Butler, Mo.

GREEN CORN AND APPLE ENGORGEMENT IN CATTLE

On September 8th last year, I was called to see a cow that had broken into a field of green corn some time during the night before. About noon she came staggering to the barn and was barely able to travel. She had a profuse diarrhea, the discharge being very watery and extremely foul smelling.

I saw the cow a couple of hours later, and by that time she had gone down and was unable to get up. She lay stretched out on her side and took no notice of her surroundings. The temperature was only slightly elevated. The history and symptoms presented made diagnosis comparatively easy.

The treatment consisted of the following: sodium bicarbonate, one pound; liquor cresolis compositus, one ounce; and magnesium sulphate, one pound. The sodium bicarbonate was dissolved in a gallon and a half of warm water and the liquor cresolis added. The entire amount was injected directly into the rumen. The cannula was left in place as quite a reaction resulted and a large volume of gas escaped through the cannula. It was necessary to clear the cannula quite frequently as it often became clogged with bits of green corn. After all the reaction had ceased and no more gas was being formed, the magnesium sulphate was dissolved in a gallon of warm water and injected into the rumen. The cannula was then removed and camphor given hypodermically. This concluded the treatment. I did not see the cow again, but the owner informed me that she made a complete recovery.

On September 9th I was called to see a cow that had "filled up" on apples after a wind storm. She was down when the owner found her and presented a line of symptoms practically the same as the cow described in the foregoing. She was treated exactly the same and made a complete recovery. My only reason for mentioning this case is due to the fact that the causative agent was entirely different.

Occasionally in these cases constipation is found instead of diarrhea. In these constipated cases, I double the magnesium sulphate. Otherwise the treatment is the same. In a few cases where the prostration was extreme, I have pumped up the udder, but I cannot say that this was of any benefit.

Before I adopted this line of treatment, I lost a lot of these "green corn" and "apple" cows. Since its adoption, I have been able to save a high percentage if called reasonably early. I do not know the "swivel chair" name for this condition, but it cannot be confused with anything else. The only chance for an error, I believe, is to confuse the "constipated cases" with milk fever, but the history will certainly set any one in the right direction. If I should find a case where I was in doubt, I would use the two treatments combined, as neither should interfere with the other.

There may be better treatments for this condition than the one described, but I have not found them. I certainly should be pleased to learn of a "specific" if there is any such thing

Marvin E. Hartley

Raymond, Ohio

EMBRYOTOMY IN A COW

On Easter Sunday I was called to see a sick cow. On arrival at the farm, I found the animal in a large woodland, lying down on her right side unable to rise. The owner said the cow had been gone about three days.

On examination I found the calf dead with head, neck and one forelimb exposed and greatly swollen. After getting ready for the operation, I made a circular incision just behind the calf's ears, skinned out the neck and amputated it near the shoulders. Next I sutured the skin over the bones to protect the mother, then pushed the fetus back in the womb, straightened the other forelimb, corded both forelimbs and applied traction, but the calf would not move.

Further examination showed the calf had been dead so long that it was distended with gas, making delivery impossible. I made an incision in the breast of the fetus large enough for my hand and arm, removed all the internal organs of the calf and delivered it with ease.

James A. Shuck

Danese, W. Va.

CELOSOMUS DELIVERED BY EMBRYOTOMY

On April 4th, at 11:30 p. m., I received a message to go a distance of eight miles to attend a cow that was unable to calve. I found a big Devon cow, which had gone her full period of gestation, straining badly and had been doing so since the afternoon.

After thoroughly cleansing my hands and arms and the genitals of the cow, I examined her and found the head and four feet of the fetus presented. Proceeding further, I discovered it was two hind and two fore feet, and as it seemed a big calf, I concluded it was a single pregnancy. I tried at once to push the hind feet into the uterus. This was a difficult procedure, but more easily accomplished when the cow was on her legs. After some time I succeeded in getting the legs back, and I corded the head and fore feet with traction ropes. Then with four assistants pulling and with plenty of lubricant in the passage, considerable traction was employed but with no result.

I considered that if traction was persisted in the life of the cow would be endangered, so I threw her by Rouff's method, and by means of pulley blocks and two felt-lined rope hobbles, which I attached to the legs of the cow, one above each hock, I raised her hindquarters about two feet, thoroughly packing the space between the floor and the hindquarters of the cow with straw. I examined her again and found that there was no obstruction in the vaginal canal to prevent birth, and so I tried traction again, but it was of no avail.

I considered that there was some obstruction in the uterus, and so embryotomy was performed. The head of the fetus was now outside the vagina and was removed, also the right fore limb. The method of removing the limb was as follows: The leg was pulled out as far as possible and the skin incised around the leg above the fetlock joint. The skin was then cut from this incision to just above the elbow and detached from the leg. The prepectoral and subscapular muscles were severed and the limb pulled away. This gave me more room to examine the calf, and I found I was dealing with a monstrosity. Luckily the cow had plenty of room, and I kept my hand in the uterus, pushing the hind legs away from the pelvis, and at the same time the assistants were ordered to pull. After considerable effort, the calf began to move. I removed my hand, and the cow was lowered to the ground, the blocks being removed. Delivery was then accomplished fairly easily.

The membranes came away quickly, and two iodoform and boric acid pessaries were inserted. The cow was given a laxative drench and made comfortable. She soon got up but had a poor appetite for a couple of days but eventually made a good recovery. The calf proved to be a schistosomus reflexus or what is known locally as a "moon" calf.

R. H. Penhale, M. R. C. V. S.
Holsworthy, Devon, England

ACTINOMYCOSIS IN BULL

I am treating a case of lump jaw in a two-year-old bull and have been giving iodid of potassium for ten days. It has raised the scurf but the eyes have not watered any, and the animal still has a good appetite and is gaining rapidly in flesh. Should the treatment be changed or continued?—J B.

Reply: Potassium iodid as a treatment for lump jaw in the soft tissues, if used, should be as an adjunct to incision of the abscesses if present and evacuation of the pus. In the dense wall of the fibrous tissue near the point where it is breaking down and forming pus, the circulation is insufficient to enable potassium iodid administered internally to overcome the infection.

It is best to open the abscesses freely and to pack the recesses with some caustic such as absorbent cotton in which has been incorporated all of the mercuric chlorid powder that will adhere to the fibers, or gauze saturated with pure formalin. After a few days, a dense eschar will be formed, which should be removed with dressing forceps as soon as it is loosened sufficiently to be pulled away.

This, in addition to the administration of potassium iodid to destroy the actinomyces where it is extending into new tissues, is a treatment successful in a large number of cases. Where the actinomycotic infection is recent and abscesses have not formed or where the infection is in the tongue where abscess formation is not prone to occur, internal administration of potassium iodid alone is frequently and promptly efficacious.

In actinomycosis of bony tissue, where destruction has not gone too far, the administration of potassium iodid internally is indicated and frequently surprisingly effective. Free opening and the application of tincture of iodin direct to the infected tissue, in addition to the internal treatment, is advisable in this latter condition.

The fact that the animal to which you refer does not show lacrimation and loss of appetite

is evidence that the toxic effect of iodin has not yet been reached, and if the case is a severe one, it would appear advisable to push the iodin a little further, although it is not necessary to continue this treatment until the animal loses markedly in flesh and has a profuse nasal and lacrimal discharge and rapid shedding of hair. The point at which to stop is somewhere between the mild symptoms of iodism that you have already induced and the exaggerated symptoms.

ASCITES IN A COW

The following case came to my attention the first part of May, 1925, the patient being a nine-year-old Jersey cow. The owner said the cow's abdomen had been somewhat enlarged for two months or more, also that at times the animal had a ravenous appetite and at other times would eat but little.

The patient's temperature was 102.6, no inflammatory process in membranes of the eyes, could detect no sounds in the abdomen whatever. I gave the following treatment by the mouth: three rumen compound tablets, consisting of barium chlorid and tartar emetic, 30 grains each, also four ounces turpentine in a pint of water.

The following day the owner called, stating the animal was no better although the cathartic had acted as desired. I was requested to return to administer further treatment if necessary.

I found the cow's abdomen somewhat softened and on pressure a sound as if some foreign substance was present. I inserted an aspirating needle in the left side on the posterior border of the last rib, and a yellow gummy fluid ran from the needle cannula. Later withdrawing the needle cannula, I inserted the cattle trocar, from which a full stream of fluid ran for about one and three-fourths hours, yielding about sixteen gallons of this fluid in all and making a decided difference in the appearance of the affected animal.

I gave the owner the following medicines to administer: aromatic spiritis of ammonia, four ounces, two tablespoonfuls to be given in a pint of water every two hours; tincture of gentian to be given on the feed morning and evening, two tablespoonfuls; and Fowler's solution of arsenic, one tablespoonful to be given at noon and night mixed well in the feed or in a half pint of water as a drench.

W. A. Wallace

Ashland, Ky.

INTOXICATION FROM SILAGE

A farmer called and stated that he had a heifer down in the field. He did not know what ailed her, but she was in a very bad way. I went at once and found the heifer lying flat in a field behind the barn. We placed her on her sternum, and after considerable persuasion she got on her feet, staggered and fell again, vomiting some sour material.

Thinking that perhaps it was a case of choke (there was some bloating), I passed the stomach tube without apparent results. Then I tried to determine the cause, the farmer declaring all the time that the cow was poisoned. I looked all about but found nothing suspicious and was almost discouraged, when I noticed the barnyard gate was open. The silo (an old one) had been filled recently and some liquid was trickling from beneath. After questioning, the owner admitted seeing the cow near the silo. Diagnosis, intoxication.

A physic was administered and nux and sulphocarbolates left to be given, with the result that the next morning the heifer was "right as rain."

J. J. Shelly

Bethlehem, Pa.

ENCOUNTER WITH ENRAGED BULL

On my way home from a professional call on June 5th, I noticed a short distance from the road a bullock stretched out full length and apparently dead. As I did the veterinary work for the ranch and being government veterinarian for the district as well, I decided that an investigation was in order. I got out of my car, looked over the field, and not seeing any other animals, I decided that this one had died and the others had gone and left him. I casually walked over to where the beast lay, noticing beforehand that it was a large Hereford bull.

When I got right in front of him, he either heard or smelt me, for he was on his feet in a flash. Of course, I wanted to be back in my car right then, but my legs were not as swift as my desire, and the brute had overtaken me in about five jumps. I threw myself flat, only to find myself the next instant flying through the air tossed from the bull's horns. I came down on my right side and back with a thud, when I heard a most blood-curdling bellow and saw the bull with head down charging from about six feet distant. When he was just on top of me, I made a quick half turn over and towards him. His horns passed over my body,

but one of them came down with great force on my left thigh. He evidently thought he had me impaled on his horns as in this position he made several thrusts and trampled my body with his feet. He then backed away a few feet shaking his head as though he would renew the attack, but in a short time he turned and slowly walked away much to my relief.

When he had gone about twenty-five feet, I was considering the advisability of trying to make my car, when he deliberately turned, walked back and stood over me once more. He did not, however, make any demonstration and after one good look seemed satisfied that he had done a good job and walked deliberately away, not looking back once.

When I thought the distance was safe, I arose to make a rush for my car, but once on my feet I found progress slow as my left leg was practically useless. I made it, however, without any mishap. The ride of twenty miles home was very trying. I suffered from the bumps of the road, and in about thirty minutes, from reaction and shock which made me quite ill.

And all of this misfortune through a wrong diagnosis. The bull was "not dead but sleeping," the sequel being that the writer has been confined to his bed for a number of days nursing a wonderful flock of bruises. If there is a moral to this story, I think it is: When approaching a bull, do so with caution, even though he be dead.

If the reading of this article will have helped any one to avoid trouble similar to that which I experienced, I shall feel more than repaid for the trouble taken to send it in.

A. R. Rowat, D. V. S.

Honokaa, Hawaii

SLOUGHING OF SHOULDER MUSCLE

On April 11th I was called to see a small bunch of calves, one of which was supposed to have blackleg. I vaccinated them all with blackleg aggressin and applied an iodin liniment to the shoulder of the lame calf. This swelling gave the appearance of blackleg, and I thought the calf would die, but to my surprise it got well. About ten days later, the owner called and said the calf's shoulder was about to come off and asked me to stop and see it. I found the postea-spinatus muscle had died, and it took but very ltitle cutting to remove the entire muscle. What was the trouble?

C. L. Reece, D. V. S.

Savannah, Mo.

AN OBSTETRICAL REPORT

The report of Dr. Burson of Georgia in the April number of Veterinary Medicine brings to my mind recollections of several obstetrical cases of the past, one of which stands out prominently by itself.

On a Friday evening, a three-year-old registered Hereford came in from pasture with the herd as usual. Her time was up, and the owner noticed a very slight discharge from the vulva. There were no labor pains and nothing to indicate that the cow was trying to give birth to a calf, so the owner stated. The animal went out with the herd the following morning as usual and showed nothing more until the next Friday morning, when the owner noticed a very strong odor emanating from this heifer and decided to call for help.

On examination I found a posterior presentation. The buttocks of the calf were wedged in the pelvic inlet, the legs extending forward from the hip joints. The calf was, of course, dead. It was greatly swollen, dry and the hair slipping off. The vagina of the heifer was swollen quite a bit and very dry. There was positively no chance to use an embryotomy knife. This looked like, and was, a real job.

No instruments whatever were used in effecting delivery with the exception of cords. The skin was torn with the finger from the anus to a point over the hip joint of the fetus. That joint was then dissected or torn out and all attachments broken down. A cord was then applied around the femur and slight traction used. The entire leg was skinned out, using the first finger as a knife. The other leg was removed in a similar manner. This little job consumed nearly three hours, and I was busy all the time. Everything was so tight that progress was slow.

A cord was then applied around the body of the calf in front of the pelvis, the removal of the limbs making this possible. The calf and passage were well lubricated and considerable traction applied. The fetus was delivered successfully. The uterus of the heifer was cleaned up in the usual way, a stimulant given, and a follow-up tonic left with the owner. A complete recovery resulted.

I don't believe that I left this case in as good physical condition as Dr. Burson did his, but I beat him to a frazzle from a financial standpoint.

Marvin E. Hartley

Raymond, Ohio

EPINEPHRIN SOLUTION FOR MILK FEVER

I was much interested in Dr. N. E. Peigh's prize winning case report upon the use of adrenalin (the official name is epinephrin hydrochlorid solution) for the treatment of milk fever in cows. Epinephrin hydrochlorid solution appears to be indicated in this condition and Dr. Peigh is to be congratulated upon putting the idea into practice.

We suggest, however, that epinephrin hydrochlorid solution be used intravenously to obtain the best results. When it is injected subcutaneously, the arterial blood vessels contract and the absorption of the epinephrin is greatly retarded.

When 1 cc. of a 1:10000 solution of epinephrin hydrochlorid is given intravenously to a dog weighing 25 pounds, the blood pressure is immediately raised approximately 60 mm., as shown by a mercury manometer. We would suggest that in treating milk fever of cows, a dose of from 2 to 3 cc. of a 1:1000 (standard solution) of epinephrin hydrochlorid solution be injected intravenously. Prompt action may be expected and much less, approximately one-fourth, of the epinephrin solution is required than when it is given subcutaneously.

N. S. Mayo

The Abbott Laboratories, Chicago

RUPTURE OF THE PREPUCE IN A BULL

I was called to a Jersey farm to see a two-year-old bull with the prepuce torn from the abdomen completely and protruding six inches with the penis. I studied how to operate on this case as I could not find anything in textbooks regarding the surgical treatment of this condition.

I used a local anesthetic and tied ropes to the halter and hind limbs of the bull and stretched him on his side. I removed about three inches of the protrusion, which had turned dark. I then made an incision at the bottom of the sheath proper, three inches backward, and then incised the prepuce. After massaging and drawing it back, I sutured it to the sheath proper ventrally and laterally only. These stitches were removed seven days later and Mercurochrome, 1 per cent solution, used twice daily on the wound, also a cresol compound to repel the flies.

I was afraid that the operation would leave the penis protruding the three inches I removed off the inner lining of the sheath membrane. However, three weeks later the penis was drawn inward completely. No more cows have been bred to this bull to date. I advised waiting three weeks more.

Before this accident occurred, the bull served a cow fourteen times and was still serving her when the owner found the animal in this condition. I think the muscles became weak and ruptured because of so much abuse and irritation. This is the first case of this kind I have ever seen or heard about in which the ruptured prepuce protruded six to seven inches with the penis.

H. G. Stephenson, D. V. M.

Independence, Kan.

LEUKEMIA IN BULL

Recently I was called to see a Holstein bull, about twenty months old, which presented a swelling very noticeable, about midway between the throat and sternum. It was diffuse, of considerable size, hard and a little sensitive. The animal ate and drank very little, although it apparently had been normal two weeks before but had gradually become dull. The swelling was noticed only four days before my visit. At the time of my call, the patient showed a temperature of 104.6° F., breathing a little labored, and examination of the swelling distressed the animal considerably. The heart was beating rapidly and pounding. Traumatic pericarditis was suspected, and no treatment was prescribed, but permission was obtained to hold a post-mortem examination when the animal died. Autopsy revealed two very large masses which I determined were lymph glands. One was where the swelling was exhibited, between the throat and sternum, and the other in the thoracic cavity at the entrance and attached to the pericardial sac. These masses were about ten inches long, seven inches wide and four inches thick through the center, white and red with no pus nor tubercules. The heart was about four times enlarged, very thick and muscular to the touch. Petechial hemorrhages were noted on the serous membrane of the thoracic cavity about the lesion. Other organs apparently were normal. The liver may have been enlarged with a white, friable fibrous network and a thin bloody exudate. I should appreciate diagnosis and suggestions as to treatment if any.—W. T. W.

Reply: The case described seems more like leukemia than anything else, although in this condition one would expect more than two of the lymph glands to be enlarged, and particularly enlargement of the prescapular and precrural lymph glands. Of course, like other dis-

eases leukemia does not always run a typical course. The general condition of the bull and the appearance of the lymph glands when sectioned, however, incline one to think that leukemia is the diagnosis likely to be most correct in this instance. This is a condition relatively rare, and the cause is unknown. It is thought not to be contagious.

RADICAL OPERATION FOR POLL EVIL

(Report awarded first prize)

One year ago last June, I was called to see a horse, about twelve years old, weighing around 1500 pounds. I found him suffering from a bad case of poll evil. I advised the radical operation immediately. The farmer, however, was not sure but would let me know in the near future. Six weeks later he came in and told me that he guessed the operation was not necessary as some friend of his had a sure cure and it was working fine. However, towards fall I was told that things were not doing as well as expected. The owner called to see me this last May, the 15th, asking me when I could operate, so I informed him that I would be there the next day.

The following day I found a very bad case of poll evil, showing signs of the use of a very severe caustic. The animal itself was rather thin but had a good appetite, although it couldn't pick its food from the ground.

The operation was performed under the influence of general anesthesia, brought about in the following manner. A small trocar and cannula were placed in the left jugular vein, the trocar removed and a small piece of rubber tubing, about eighteen inches long, attached to the cannula. A funnel was then placed on the other end of the tube. Four ounces of normal saline solution were poured into the funnel and allowed to flow into the jugular vein, immediately followed by eight ounces of chloral hydrate solution (three ounces of chloral hydrate dissolved in an eight-ounce bottle of boiled water), then followed up with three or four ounces of saline solution.

To the practitioner who is not familiar with this method of general anesthesia, let me issue a word of warning. Sometimes the horse will get very groggy and fall down before all the chloral has entered the jugular, so the operator should be careful not to get stepped on. Also be sure to get the chloral hydrate into the jugular vein. Try to rinse the cannula with saline solution before removing. If much of the chloral gets into the tissues surrounding the jugular vein, there is apt to be severe sloughing causing a complete destruction of the jugular, carotid, etc. Experience teaches.

With ordinary care, this is a very safe procedure, and I often use it instead of casting where I want to attend to a severe nail prick or other minor operations where the animal is unruly and somebody is likely to get hurt. Another advantage is the fact that as soon as the anesthetic has been given, one can commence operation.

In a major operation of this kind, it is advisable to administer a few whiffs of chloroform to get a more complete anesthesia, and with an occasional whiff during the operation, the animal can be kept quiet for two hours or more.

The mane was clipped off as short as possible and the seat of operation thoroughly scrubbed with a stiff brush, soap and a fairly strong solution of disinfectant. With the scalpel an incision was made directly along the course of the median line, overlapping the crest of the occiput anteriorly and extending backward posterior to the spine of the dentata (fourteen inches long in this case) and from two to three inches deep or through the thick tissue underlying the mane, and through the newly formed connective tissue that usually accompanies poll evil. I also made the incision through the anterior portion of the ligamentum nuchae, being very careful not to injure the underlying tissues.

In order to arrest the rather copious flow of blood at this stage, large tumor forceps were placed on each side of the incision and each one handed to one of my numerous assistants with directions to pull outwards quite forcibly. This checked the flow to such an extent that the blood did not interfere with the operation, and by the time the operation was over, there was practically no bleeding.

I placed my finger under one-half of the ligamentum nuchae at the occipital crest to guide the probe-pointed bistoury and carefully cut upwards. The other half was removed with the same care.

The stub end of the ligamentum nuchae was grasped with a pair of large forceps and held by an assistant while the portion of the ligament, the newly formed connective tissue and the diseased portion of the surrounding tissues, which all seemed to be fused into one diseased mass, were dissected out and removed, the piece being about six inches long.

A piece of oakum, about twelve inches long and two inches in diameter, was then soaked in a 1-1000 solution of bichlorid and placed loosely into the incision, the sides being drawn

together within about an inch and a half apart by four interrupted stitches of suturing linen.

Twenty-four hours after, the packing was removed but not the stitches. The wound was cleansed carefully and repacked with oakum treated as before. The next four days the owner loosely packed the opening with absorbent cotton soaked in a 1-1000 solution of bichlorid, and on May 21st I removed the stitches and gave the parts a thorough cleansing. The wound looked well, and the horse felt much better, in fact, he was pasturing in the orchard when I arrived.

The owner irrigated the wound every day for two weeks with creolin solution and salt water alternately. By that time the opening appeared to be half filled up, but where the ligamentum nuchae stub was left, there seemed to be a small pus pocket, so I opened it from the side and let it drain.

Ten days later the owner drove the horse to town, and the wound was almost completely healed up. I saw the horse on July 4th. He had been at work for some time, and it will be only a few weeks before the scar is completely hidden by the mane. This is the fifth case of this kind I have operated on, and I have had the same excellent results in all of them.

H. J. Davis, B. V. Sc.

Aylmer, Ontario

SUNSTROKE OR OVERHEAT

In this locality, South Central Kansas, it is not uncommon for horses to be overcome with heat and exhausted at this time of the year when the harvest is on and with the thermometer standing around the 100 degree mark. It is seldom a harvest season passes in my territory that I am not called to treat from ten to fifty cases of overheat prostration.

Symptoms: The patient stands with the head lowered and an anxious expression; nostrils dilated; short labored breathing, generally with spasm of the diaphragm (thumps). Temperature 103 to 107, and sometimes the masseter muscle is contracted until the jaws are completely fixed, and the animal is a pitiful sight.

Treatment: Cold packs are applied to the top of the head. Ten c.c. of sterile camphorated oil are injected subcutaneously every hour, and fluid extract of stramonium in dram doses given every hour. Cold enemas are given and the patient placed in the shade. It is almost always safe to leave the animal within two hours in the care of an attendant.

Now, in regard to the action of the treatment. Cold packs are indicated to reduce congestion of the brain, which is nearly always present. Camphorated oil is indicated to generalize circulation as in these cases there is little or no peripheral circulation. Fluid extract of stramonium is used to relieve labored respiration as it dilates the bronchi, also as a sedative, and to relieve spasm of the diaphragm.

I have had good results with this treatment but should like to learn the experiences of others who have had extensive contact with heat prostration cases and been successful with their treatment.

Lewis, Kans. W. M. Payton

ACETONE IN SURGICAL OPERATIONS

(Report awarded second prize)

Early in the morning of May 20, 1921, I received a call by telephone from a small town, fifteen miles distant, for me to come at once to see a horse that had been gored by a bull the night before. The owner stated the wound had about quit bleeding and he wanted to know if he should wash it off before I got there. I told him not to touch it and by all means to keep water of any kind away from it. In a few minutes I hopped in my Overland and was on my way to a bad case.

On arriving at the premises, I found an eight-year-old horse standing with an ugly contused wound of about five inches long on the left side with the posterior end of the left lung protruding between two ribs and about four inches of lung on the outside, which was cut half in two. I decided it was better to cut it off rather than return it in that lacerated condition. I made the whole skin surface sterile for twelve inches around as well as the cut and lacerated lung with acetone. Then I proceeded to cut off four inches of the end of the lung and pushed the lung minus four inches back into the thoracic cavity. Five sutures of linen thread were made in the wound to bring it together. I prepared an eight-tailed bandage of muslin, plaited to fit the abdomen, some two feet wide, and made a pocket of antiseptic gauze on the left inside of the bandage, eight inches long and six inches wide, to fit the wound before tightening up the bandage.

The following mixture was prepared:

Oil eucalyptus	℥ i
Echafolta	℥ ii
Acetone q. s.	O i

A good sized piece of absorbent cotton was soaked in this mixture and placed inside the gauze pocket so it would come directly over the wound. Then the eight-tailed bandage was tightened. This was not changed for four days.

I gave a physic ball before leaving, also prescribed a fever mixture as follows:

℞

Specific tinct. veratrum	ʒ i
Iron citrate	ʒ vi
Aqua q. s.	ʒ xii

M.

Sig. one ounce every three hours with dose syringe.

Instructions were given to keep the outside of the bandage over the pocket and wound wet with the eucalyptus, echafolta, acetone mixture three times a day.

On my return the fourth day, the horse had a temperature of 102.2 F., had never lain down and was eating fairly well. I removed the bandage and found the wound in good shape. It was cleansed with the acetone solution, also the bandage and applied as before with instructions to change once a day.

On the seventh day, the stitches began to draw and were removed. From this time on, the bandage was removed every twenty-four hours and the wound dressed and cleansed with the acetone mixture. At the end of two weeks, the bandage was left off entirely, but the wound was still kept wet once a day with the acetone mixture until after a little over three weeks the wound was healed entirely and the horse considered out of danger. At the end of five weeks, the animal was put to work and seemed to be as good as ever and has remained sound of wind to this day, which I was afraid at the time would not be the case.

Not a drop of water was used on the wound from the time the horse was gored until the parts were healed and the animal put to work, nor was there any bichlorid of mercury tablets or dusting powder of any kind used, nothing but acetone to cleanse the wound at the start and afterwards the eucalyptus-echalfolta-acetone mixture as in the prescription given. It is seldom one meets with a case like this. However, if I do have another, I shall be inclined to treat it on the same lines as I did this one.

I have used acetone quite frequently for thirty-five years as an antiseptic and first dressing for cuts and wounds, but the gravity of this particular case is why I mentioned it in this connection. When I first began using acetone, it was then called pyroligneous acid or crude acetic acid and was much darker in color than it is now due to tarry substances. I have often wondered why this drug is not more used for cleansing wounds than alcohol. I very seldom use iodin any more. The first time I noticed its use for wounds mentioned in veterinary literature was some eight years ago in "Veterinary Prescriptions," where I believe pixol, acetone and denatured alcohol composed the mixture. I have also used this and think a great deal of it, but I like the eucalyptus, echafolta and acetone better; at least, it seems that I have had better success with it. I use it in all my tuberculin testing work, hog cholera vaccination, hernia operations, spaying and castrating, and last but not least, on the dog bites I receive at my hospital, and I have never had an infected wound yet.

G. W. Browning, V. S.

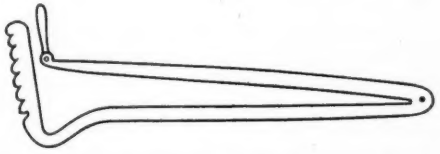
Mobile, Ala.

CASTRATING STALLIONS IN THE STANDING POSITION

(Report awarded third prize)

Having read many reports on the castration of colts and aged stallions in the standing position, I will give my experience with this operation. We are expected by the farmers to make a castrating tour in the spring. I call up my clients and let them know when I will be there, instructing them to have the colts tied in the stable but not to wait for me as I do not usually need any assistance.

I have operated on stallions of all ages alone, except with the assistance of my twitch which



I count one of my best friends. I tie the animal to the right side of a double stall, tying very short. Then I put the twitch on, get some hot water and wash the animal's scrotum, after which I proceed to operate by standing on the near side of the animal. The right testicle is grasped between the thumb and first finger, and with one bold, fast stroke of the knife, the testicle is exposed. I proceed in the same manner with the left testicle. I then apply the emasculator as far up the right cord as I can and remove it. I then apply the emasculator to the left testicle and remove it.

If the animal leans heavily toward me when removing the left testicle, I go to the other side of the horse and remove the testicle from the right side—they never lean toward the operator then.

I wash my instruments and throw the antiseptic solution on the scrotum. I use a White

emasculator and a one-blade, short castrating knife which I keep very sharp. I have castrated all sizes from ponies to ton-weight horses and in barns, pastures, race stables, etc.

There are several reasons why I prefer the standing operation. It is much quicker, easier on the animal and operator, no danger of injuring the animal like there is in throwing them, no casting harness to put on, and last but not least, it pleases the client, and that is what counts. I remember a few years ago a race man came into my office and said he had three running horses he wanted castrated as they were man eaters. The time was set and when I arrived, there were about twenty spectators to see me get killed. I had informed the owner I would operate standing and all I needed was a good man to hold the twitch. We got along fine and no one was killed, and the animals turned out to be useful horses.

I shall be glad to answer any questions from readers who may be interested.

J. M. Fawcett, V. S.
Regina, Saskatchewan

THE "ROARING" OPERATION

The object of this report is not to advance any new ideas in regard to technic of operation but rather to point out that such a thing as a "double roarer" exists.

Considerable discussion has arisen whenever the roaring operation was presented at an association meeting, some arguing that only left-sided paralysis exists, and some that a double-sided paralysis occasionally presents itself. Only last summer at the Northwest Veterinary Association meeting Dr. Merillat operated on a roarer, and I remember distinctly that he made the statement that it was never necessary to operate on both sides, he being one of the chief supporters of the left side theory.

While I do not claim to be an authority on this subject, yet the following report is conclusive evidence, and although not from Missouri, it will take considerable argument to "show" that I am wrong.

About sixteen months ago, I was called to see a team that was showing signs of being "quite under the weather." It was soon discovered that both horses were suffering from what we in the Northwest call "fern poisoning." Both animals stood perfectly quiet while in the stall but on being moved about would show great incoordination of movement. The black mare, to which I will limit my discussion, was a nine-year-old and weighed about 1900 pounds. Besides the incoordination mentioned, this mare showed a severe dyspnea from the time she was first seen, even while remaining quiet, there seeming to be quite an edematous condition of the larynx.

The subject was given a complete change of diet, diuretics and cold packs to the throat. In the course of ten days or so, there was considerable improvement, the animal being able at that time to walk in a normal manner, and the dyspnea was about gone. However, on the slightest motion, there would be a strained sound on inspiration. The mare was put on a treatment of potassium iodid for a few days but never improved to any great extent.

No more was seen of this case until three months later, when I happened to see the owner, and he informed me that the mare was absolutely worthless as she would choke down if walked fast or trotted a few yards. An operation was advised, but the owner seemed skeptical. However, when I made him the proposition of $50.00 if I effected a cure or nothing if I didn't, he readily accepted.

"Big Betsy" arrived at my hospital just a year ago, having taken all kinds of time to make the five-mile journey. The following day, the case was operated on in the following manner: The animal was placed in a single stall with the head where the tail ought to be, the field of operation shaved and washed with 1-500 bichlorid solution, the area made painless by the injection of a ten per cent solution of cocain, and a little adrenalin injected in small amounts over the operative field. The head was suspended with a dental halter. An incision was made about six inches in length down to the trachea, the cricothyroid ligament incised, then a pledget of cotton saturated in cocain solution swabbed in the left ventricle. Next the Blattenburg burr was inserted into the ventricle and the lining membrane or sac slowly lifted and clipped out. Now, I had quite a debate with myself whether or not to strip out the other ventricle, or whether it might be contraindicated, and by so doing I would possibly spoil a good job. So I said to myself, "Here's where G. A. is going to find out for himself."

Up to this time no incision had been made for a trachea tube, and as only a one-sided operation was performed, I didn't know whether or not dyspnea would be severe enough to warrant it, but to be on the safe side, thought it advisable to make all due preparations to make a hurried insertion of the tube if necessary. The horse was left standing cross tied in the place

of operation for a couple of hours, and no dyspnea showed at all, so she was turned around to the manger and left. Not over fifteen minutes had elapsed when the barn attendant came running to my office and informed me that the patient was choking to death. Grabbing the tube, I "made tracks" and didn't get there any too soon as the mare was stretched out with her tongue hanging out and blue as indigo. When the tube was thrust into the opening, the patient drew the most welcome breath she had ever taken. Not only was the horse very much relieved, but "yours truly" as well.

The tube was left in for about seven or eight days but taken out and cleansed daily. At the end of three weeks, the owner took the mare home to convalesce, and about six weeks later, I drove down to see what results had been obtained. The mare was hitched to a sled and driven over a dirt road, sometimes both the owner and I riding, making a heavy pull. There was a great improvement in the horse. I would say she was about one-half improved but far from normal yet. She wouldn't choke down, but her breathing was very loud after she had made quite a pull.

The horse remained on the farm for another month and was brought back for a second operation, and exactly the same routine was adopted with the exception that the trachea tube was inserted immediately after operating. I had occasion to examine the results of my first operation and found the wound entirely healed, and it was impossible for any air to get into the ventricle.

The mare was taken home again in a couple of weeks and I examined her about a month later, when she was found to be very greatly improved. The owner was advised to put her to light work and he would find that improvement would be noted for a year. At this time I put her on a halter and trotted her up and down in a field, and at the end of the trial, I decided I was the roarer as the mare was breathing about as easily when we quit as at the beginning.

Not long after, the owner called at my office and informed me that if I wanted the mare I could have her, that he didn't care to spend $50.00 on her, as he tried to work her, and she still breathed a little hard and he had to rest her frequently. I told him to wait and give the mare time, but he said he could buy a horse for $50.00 that would do his work. So since he insisted, I sent down and brought the mare home. She was put on a dump wagon last August and hasn't missed a day since. At first she did breathe a little hard on too long a pull but now will draw a ton of garbage in a four-wheel dump wagon with the wheels sunk in the mud half way to the hub, and there is no sign of any distress.

In summing up, I will say that this case has afforded me lots of time to examine and study, being in contact with the mare almost daily. I have arrived at this conclusion—that in those cases where dyspnea is so pronounced that the least exercise will choke the horse down, it is very likely that a double paralysis exists. At least, it must have been so in this case.

Another thing, as I have pointed out, is the importance of putting in the trachea tube, as it is not in the least difficult to do and eliminates all chance, because another minute in my last experience and there would have been a horse to drag out. I prefer the flat tube that is inserted between the rings and placed down the throat midway, thereby leaving the laryngeal wound unmolested. Finally, it is important to impress on the owner the necessity of patience while improvement gradually takes place.

G. A. Jones, D. V. M.

Sedro-Woolley, Wash.

LAMINITIS IN JACK WITH FATAL TERMINATION

I have had quite an interesting case which I could not diagnose to my satisfaction, so should like some light on it.

A jack about nine years old was used for breeding purposes, and this last season he was active and a sure breeder. The animal at first seemed sore in his front legs for two or three days, but the owner didn't think anything about it because he had trimmed the hoofs and pared out the sole of the foot and thought the soreness resulted from that.

On January 9th I was called, as the animal had become much worse. The jack was up on his feet a good deal of the time but very sore and could hardly move. I asked the owner if the subject could have gotten anything that would have foundered him, but he said he didn't know what it could have been, because he was just getting a little oats and hay. The temperature was 99° F., pulse hard and full; the eyes appeared normal, and the animal was eating some. I finally diagnosed it as a case of founder or laminitis, figuring the animal's feet were tender, the weather was bad, with the ground rough, and I suspected he stayed away from

water as long as he could and when he did go to drink, over-drank, thus causing water founder.

As treatment, I gave a purgative capsule and a rectal injection of soapy water, about three gallons, also sodium nitrate and dried alum, 90 grains of each, every four hours, wrapped his feet in gunny sacks and put hot water on them, as hot as could be borne by the hand in it. The feet would cool off in a half hour or so, and in that way would get hot and cold packs. This was repeated every four hours.

The next day the subject seemed to be worse and could hardly get up unless helped. I gave the same treatment as the day before except administered a purgative in the morning and one in the evening because the bowels had moved only slightly.

However, the animal seemed to get worse and on the third day appeared to be unable to get up at all I started giving oil, a half gallon in the morning and the same in the evening, but the bowels moved only a little. I also gave some sedatives when I saw he was getting worse every day. The catheter was used every day, the urine being thick and slightly tinged with blood.

The animal died on January 14th, and on autopsy everything seemed practically normal except the bladder was considerably inflamed. There was some inflammation in the intestines, but the contents were soft throughout. The medicine was in the stomach and intestines. It seems unlikely that there could have been paralysis of the intestines as in that case there would not have been any movement of the bowels at all.

Is there a disease called jack disease? Breeders refer to such a malady. The owner was saying that an old jack man told him these animals get a disease that affects the back or the kidneys and they invariably die when they get it. This same man had a jack that died under similar conditions about three years ago. That animal showed symptoms just like this one and died in four days, the case having been in charge of another veterinarian.

Was my diagnosis right and did I use the right treatment?—J. C. L.

Reply by T. A. Sigler: I described this condition found in jacks in the August number of Veterinary Medicine, 1922 (page 432). I think the diagnosis of laminitis was right. In the treatment of this condition, I should have combined anodynes along with the other treatment as a jack gives up very easily and does not stand much pain. The bowel and bladder conditions were probably secondary trouble.

The feet of jacks cause much trouble owing to the way most men handle them. The hoof is harder and denser than that of a horse, and if the animal is kept confined in a small paddock or stall, the feet, especially the front ones, grow out long, lose their elasticity, become hard and dry and denuded of the varnish-like covering. The foot also loses its round profile, grows long and throws the weight on the heel. This causes a chronic type of inflammation of the sensitive structures followed by laminitis and tendonitis.

The lines so common in the foot of the horse running around the foot, on the contrary, run from heel to toe in the jack and form ridges up and down the foot from coronet to toe.

Many jack owners let the feet grow out long and do not keep them pared off properly. When they do trim the foot, they trim too close, setting up an acute form of laminitis. It seems to be a condition harder to handle in jacks than in horses. They do not yield to treatment so readily. If the feet are looked after at the proper time, one can avoid this condition.

Laminitis also sometimes develops in heavy draft stallions where the feet are allowed to grow out too long followed by close trimming.

GARBAGE AND SWINE PRODUCTION

During the war there was a concerted movement on foot for conservation of all possible food supplies. Requests were made of city officials and officials in charge of training camps, to utilize all garbage possible in the feeding of swine.

That garbage makes a palatable food for swine and is profitable as a means of disposing of such waste, has been known and such disposal has been in effect in different locations for many years. Thousands of hogs were successfully and economically fed on garbage during the period of the war.

There has always been more or less of a controversy between health department officials relative to the advisability of feeding of garbage. Some health departments contend that it is at least not sanitary and conducive to the health of the human to collect and feed garbage to hogs, and in support of these contentions, different methods of disposal have been inaugurated. Recently, two or three of the larger cities have been having difficulty in disposing of garbage. In one instance a garbage contract was let and because of the inability of the contractor to obtain a suitable location for feeding of swine, garbage was buried, after having

been limed and apparently treated so it would be of little or no danger to human health in the community. Some cities require the cooking of garbage prior to delivering it to hog feeding establishments. The purpose of the cooking is to disinfect or destroy any disease germs that might occur in the garbage. Those who have carefully studied the situation do not hesitate to say that the feeding of garbage to swine conserves a valuable feed that would otherwise be wasted.

This is a very important question and one that should largely be decided by veterinarians and particularly those veterinarians who are engaged in sanitation.

We believe that garbage should be conserved by feeding to hogs.

A. T. Kinsley

A CASE FOR DIAGNOSIS

I am submitting a case report of a mare that has puzzled me very much as I have handled horses all my life but never saw a case like this. Therefore, I thought perhaps some of the older heads may be able to diagnose the trouble and outline treatment.

A client called at my office on January 7th and told me he had a mare, six years old, of the draft type, and of late she would smother down on slight exertion like being driven a quarter of a mile in light trot to the empty wagon. He said the animal was not heavey or wind-broken. He had owned this mare about a year, and the last work she had done was in harvest time, when she worked fine. I asked him if there were any enlargements about the neck or head, and he replied that there were none. I inquired about the condition, and he said the mare was in about the same flesh as at harvest time. The feed was mostly oats and hay as corn had been taken away some time before. The animal was kept in a large box stall with the door opening on a big lot where she could run on nice days.

I went to the farm to make an examination and found the mare in the box stall. Her temperature, pulse and respiration were normal. There were no enlargements about the neck or head. I also looked for tumors in the nostrils but found none. I next placed a mouth speculum on the horse and examined the teeth, pharynx and larynx, but they seemed to be in fine shape. I then had the owner trot the mare at the end of a halter rope. She went fine, and I did not notice any noise about her any place. I had her hitched with another animal to an empty wagon and examined the collar and harness which seemed to fit well, being a new outfit. I ran alongside and in front of the mare to see that she was getting the right pressure on the shoulders from the collar. She went in slow trot for about thirty yards, when she began to shake her head and weave. She was driven about fifteen yards farther, when she had to be stopped to keep her from falling down. It seemed as if she was smothering or something was filling up her lungs. I examined her heart while in this condition but could not detect any abnormal sounds. This sinking spell would last about twenty or thirty minutes, then she was able to go on a little farther. I thought the animal's heart must be weak from some cause, so gave two weeks' treatment on fluid extract of nux vomica and tincture of digitalis, but it did not seem to help her.

Later the owner told me he had talked with another veterinarian, who said he had had several cases like this and believed it was due to stomach trouble. The owner also said he had been advised by a quack that whisky was a sure cure for it. I should appreciate some opinion as to what this is and how to treat it. I might say that the mare is in good flesh but not overly fat.

C. R. Kinnison, D. V. M.

Chillicothe, Mo.

ASCITES IN SOW

I should like some information regarding a case in a sow. I was at a cilent's place attending a cow, and before I left, the owner said he had a sow that had gone off her feed that morning. I took a look at her and found she was a big white sow with eight pigs. Her abdomen was distended and breathing a little labored. We couldn't approach her without causing the breathing to become more labored. From what the client told me, I thought it might be impaction. He said that morning was the first time he noticed there was anything wrong with the animal. I told him to try to get some oil into her and left on another call.

On my return, this client came out and stopped me with the information that the sow had died. So I held a postmortem examination. On opening the abdominal wall, there was a flow of bloody fluid, about four gallons. A large place on the mesentery, about six inches square, was in a thickened, jelly-like condition. The bowels were inflamed, having a blistered surface with red elevations on the outside but

inside appeared normal. After removal of the digestive organs, I noticed the covering of the kidneys was of the same nature as the abdominal cavity, but the inside appeared normal. On opening the diaphragm, about three gallons more of fluid escaped. The pericardial sac was adherent at places to the heart, and the places where it adhered were badly inflamed. The lungs were normal.

Is it possible that such conditions could have been coming on for some time without the sow showing any ill health, and what could have been the cause of this condition?—E. A. B.

Reply by A. T. Kinsley: I am inclined to believe that the sow in question either had an infection of the peritoneum or related structures which resulted in the exudation of excessive fluid, or what is more likely, there was some interference with the portal circulation resulting in ascites or abdominal dropsy. This condition, as you know, is non-febrile. Animals usually retain their appetite, but if the case was one of inflammation of the peritoneum, there would be diminished appetite or no appetite, and the patient would show considerable pain when moving about.

RUPTURE OF THE DIAPHRAGM IN A CAT

The following is a case which was very interesting to me due to the rapid failing of the animal after I saw it and the postmortem findings showed it a case of long standing.

Subject: Persian cat, male, 14 months old, weight 11 pounds.

History: The animal had always appeared a little gaunt, and the owner said, "It never appeared full after eating." The appetite was variable and small at the best. The stools had never been noticed so I could not get any information about them from the owner, but he said the animal would lie stretched out and breathe very fast but never panted. This condition had become aggravated in the last two weeks. He also mentioned that the animal would lie on the abdomen and meow as if in pain, this latter occurring only occasionally. The subject had been fed bread and milk, liver, etc.

Examination, 9 p. m., June 22nd. The visible mucous membranes were slightly pale; temperature 103° F.; pulse 130. The animal appeared bright but a little uneasy. Upon manipulation of the abdomen, which was very much tucked up, two lumps, about the size of a pigeon's egg, were felt and were about an inch apart. As the cat was shedding, I suspected hair balls but did not altogether like the feel of this cavity. I next used the stethoscope, but the sounds in both cavities were beyond any interpretation, sounding to me like static on a radio.

Diagnosis: No particular diagnosis was made as the case showed such varied symptoms, none being definite, as the lumps might be hair balls or tumors, etc. The owner was requested to bring the animal back in a day or two.

Prognosis: Guarded. While not very encouraging I did not discourage the owner too much, but told him if the animal died, I should like to hold a post-mortem examination.

Treatment: I gave the animal a laxative tablet, also a tonic pill and sent some of each home to give according to directions, one of the laxative tablets every evening and the tonic three times a day.

Necropsy: On June 23rd at 9:30 a. m., the owner came into the office and said, "I have brought back the cat as I found him dead when I got up about an hour ago, and its bed was all torn up as if he died in great pain." I proceeded to hold a postmortem examination and found the animal was still warm and rigor mortis slight.

I opened the abdominal cavity by a longitudinal incision and to my surprise found only seven inches of the whole intestines in this cavity, this part being very black and congested. On opening this part, I found two hair balls about an inch in diameter, very firm and hard. The bladder was empty and appeared normal. The kidneys appeared normal to the naked eye. I next proceeded to follow the intestine which was in the abdominal cavity and found it passed through a rupture of the right pillar of the diaphragm. There were no adhesions, and the edges of the rupture were smooth and somewhat thickened, leading me to believe that the rupture was not recent, and to me there seemed to be a possibility of the condition being congenital. The intestines had passed through this opening into the thoracic cavity leaving only the seven inches before mentioned in the abdominal cavity. The intestines which were in the thoracic cavity were pale and the wall was quite thick, the lumen small, with the usual intestinal contents.

The stomach lay to the right of the median plane in the thoracic cavity and was distended with gas, otherwise normal to the naked eye. The thoracic cavity contained considerable fluid, and the pleura was somewhat congested.

The lungs were very small, each about the

size of a fifty-cent piece. In both there appeared areas of consolidation which were very dark in color. The surface of each lung was covered with numerous yellow blebs, about the size of a match head, and when these were incised a frothy exudate was seen.

The heart was a trifle smaller than normal but appeared normal in color and structure.

The peculiar part of this condition was that the kidneys and liver were in their proper location and appeared normal while every other organ was disarranged. The spleen and pancreas were normal although displaced with the movement of the intestines.

James O. McCoy, B. V. Sc.

Lakewood, Ohio

HOUND HAS ENCOUNTER WITH PORCUPINE

(Report awarded fourth prize)

An interesting case came in some weeks ago, interesting because of its unusualness in this section. A greyhound had encountered a porcupine, and the owner "sicked" him on to have some sport. Forty-eight hours later the case came in. Somewhat depressed but still with lots of life, the "friend of man" was unable to open or close his mouth, it being open a matter of an inch or so with quills protruding all over, pinning the tongue to the jaw and roof of the mouth, some going clean through from the top of the nose to the under side of the lower jaw.

A pint of distilled water containing one and one-half ounces of chloral hydrate, carried in the dark recesses of the miniature Lincoln, was brought out and two ounces injected per rectum. One-half grain of strychnin sulphate was dissolved in 4 c.c. of water for emergency. A long wait was necessary until the anesthetic showed its effect, chloroform and ether, of course, being out of the question.

A clean pair of pliers and an artery forceps were used, pulling the quills through the shortest route possible. If a quill could not be backed out as easily as it seemed humane, it was shoved through, the point caught with the pliers and drawn through. After over a hundred had been removed from the dog, the owner began to act easier. Several places on the skin had to be opened with a bistoury to allow the points to protrude. Finally, the owner announced, "Well, Doc, I think we have them all." Close examination revealed four more, which were removed after some care and time.

At this time the animal was noticed to be lying as if dead. A small amount of strychnin solution was injected and everything seemed O. K. A final examination revealed two remaining quills. These were removed after some maneuvering. The mouth was washed with plain cold water. Only a few places were bleeding a small amount. All outside wounds, after sponging off and thoroughly drying, were painted with tincture of iodin. Another hypodermic injection of strychnin was given, and in a short time the dog sat up. Warm water was injected per rectum to wash out any excess of the chloral hydrate, with the result it proved the animal had too much strychnin. More chloral was then administered.

The dog was secured near a pan of clean, cool water and was given milk to drink for supper. He drank the remains of the quart during the night. The next morning he took a quart at feeding time and another during the middle of the day and went home in the evening. A week later he was running rabbits. The bill was $5.00 and the cost of the milk, and it was promptly paid.

A. R. Mahan

Marysville, Cal.

OPERATION ON CONTRACTED TENDONS OF A DOG

A two-months-old American pit bull dog was brought to me by a client with the complaint that the dog's legs were crooked and he could not walk. Examination revealed that the dog was suffering from rachitis, and in addition the flexor tendons on both front legs were severely contracted.

After some deliberation, I decided I would operate on the flexor tendons, considering it more of an experiment than anything else.

The dog was placed in a recumbent position in a suitable place and restrained. The hair posterior and proximal to the carpal joints was clipped closely and the area thoroughly disinfected. A small incision was made on the medial side posterior to the radial bone, about one and one-half inches above the carpal joint. A straight-pointed tenotome was inserted through this incision and passed anterior to the tendons. The cutting surface was turned against the tendons and each one severed by gradual pressure on the foot. The opposite leg was dealt with accordingly.

Two small splints were made from a cigar box, about one-half inch wide and four inches long, wrapped with cotton and placed on each leg, one in front and one behind the radial bone, extending about one and one-half inch below the carpal joint, to furnish sufficient support for

the leg. These were securely bandaged and liquid glass thoroughly applied in order to harden the bandage sufficient to hold.

The dog was returned to me in ten days for examination. The bandages and splints were still intact but had been slightly gnawed by the dog. The splints were removed and the animal given an opportunity to walk without them. Considerable improvement was noticed, but it was decided to resplint for another period of ten days. The splints were again bandaged in place but not as tightly as before.

After another ten-day period the splints were again removed. The dog at this time had good use of his legs considering they were bandaged and he could support his weight easily without the bandages.

During this period the animal was fed an ordinary ration of scraps from the kitchen with the addition of fresh meat and lime water. The dog is now walking in a normal manner, the only noticeable change being large carpal joints, which, however, are not very bad. The owner is well pleased with the results.

H. W. Graves, D. V. M.

Union, S. C.

CANINE DISTEMPER VACCINATION

The process of immunization of dogs for the prevention of distemper is a wide and varied field in practice and should not be exhausted by one report or treatise. Not all dogs respond the same to the injection of bacterin in the process of immunization.

The average dose is used without very much distressing symptoms or discomfort to the patient. While we expect a rise of temperature and drowsiness with a slight setback in general for some twelve to thirty-six hours, the next day usually finds the patient feeling fine.

Three cases of an unusual nature come to my mind at this time.

Case No. 1. Subject, Airedale, male puppy, three months old. Injected with canine distemper bacterin (mixed) three times ten days apart, with increasing doses of two, three and four c.c. respectively. The usual local and systemic reaction occurred each time and was satisfactory. About four months elapsed, and my attention and services were again summoned for this dog. One degree rise of temperature was noted, inappetence, medium discharge from the eyes and a sero-mucoid discharge from the nostrils. I used two 4 c.c. doses of the bacterin (same kind) five days apart, with triple arsenate tablets t. i. d., and the patient made a splendid response in about ten days.

Case No. 2. Subject, Llewellyn Setter, male, 7 months old. Injected 2 c.c. bacterin (mixed) with no unusual effects. In two weeks injected 4 c.c., and that night the subject got wet. The following day he was extremely uncomfortable with a local reaction and three degrees rise of temperature, inappetence for three days. By good nursing and stimulative treatment, he made a nice recovery in one week.

Case No. 3. Subject, German Shepherd, bitch, 15 months old. At seven months, she received two c.c. bacterin with the usual slight reaction. Two months later, injected 3 c.c. bacterin, resulting in a local reaction, the swelling being about the size of a hen's egg. There was also a slight systemic reaction. Five months later she received 4 c.c. bacterin (mixed). The systemic reaction was severe, two degrees rise of temperature, dullness, appetite retarded, slight mucous discharge from the eyes, lying around without desire to move. The local reaction was a severe swelling about the size of a base ball, hot and painful, with edema around this area, particularly below. The systemic effect subsided in two days, and the local reaction cleared away gradually in ten days.

I think bacterins are beneficial but should be used cautiously with care in the selection of the patients and the dosage when treating the better bred dogs.

J. S. Allen, D. V. M.

Nampa, Idaho

CESAREAN SECTION IN A BITCH

On April 4th I was called to see a Boston Terrier which was due to whelp on that date. On examination, I found one puppy below the brim of the pelvis. I told the owner we would wait a while and see how forcible the labor pains were. So we waited and they seemed forceful enough, but not sufficient to bring out a puppy. One ampule of pituitrin was given, but still no puppy. I then waited one hour, and as nothing apparently was going to happen, I told the owner to wait until morning. This was 3 o'clock and I had been on the scene at 10 o'clock.

The next morning at 8 o'clock the owner was in the office. The dog was prepared by cleansing the site of operation. The abdominal method was used, making the incision about two inches from the umbilicus. The animal was previously anesthetized with straight ether. After exposing the uterus, the reason for the bitch not whelping was apparent. I had attended this bitch on two previous occasions

without the necessity of operating. Two puppies were in the right horn and one in the body of the uterus. Whenever the bitch labored, the two pups in the right horn would press down on the one in the body of the uterus, which could not be gotten up in the pelvic cavity.

In two weeks the bitch made a complete recovery although the puppies died. However, the owner seemed very satisfied. I have done quite a bit of this work, and it is very unusual to lose the pups. Neither does the female seem to be bothered by the incision being so close to the breasts, nor does it affect the supply of milk. Some operators claim that the bitch does not breed afterwards, but we do not find it so. We also disagree with the idea of operating in three hours if the bitch does not whelp. We have waited eight to sixteen or more hours. However, we find that the secret lies in knowing when to operate, and no one can tell except by experience. I believe my partner's judgment (Dr. Aull) in this respect is uncanny. So far our success in this work has been about ninety per cent. In other words, the little green wagon made no call.

C. L. Sanders, D. V. M.

Dayton, Ohio.

HYPODERMOCLYSIS IN CANINE PRACTICE

Hypodermoclysis is one of the means employed to introduce drugs and fluids into the body other than by the gastro-intestinal tract. It is used in acidiosis, in marasmus, in active diarrhea or excessive vomiting, in which there has been an extreme loss of body fluids and in hemorrhage.

In our work we have used only the sterile normal saline solution, administering with a large hypodermic syringe, using the usual precautions as to cleanliness and injecting the solution subcutaneously in the axillary space, back of the neck and over the abdomen.

In small dogs, as Pekes, etc., we inject 50 c.c. at a time every twelve hours. In medium sized dogs, as the Boston, etc., we inject 100 c.c. In the larger dogs, as Pointers, etc., we inject 200 c.c., and in dogs the size of a Great Dane, as much as 500 c.c.

After two treatments, the dogs are offered a small amount of water. If the water is retained, they are given a small amount every half hour for four times and then allowed to drink as much as they want. If there is the slightest symptom of nausea, they are taken off the water, the treatments continued and the same procedure carried out.

The beautiful response to this treatment when all other methods fail, makes it of untold value to the small animal practitioner. When care is taken in administering the injections, there are no bad after effects. The quickness of absorption in badly dehydrated cases is remarkable.

J. G. Horning and A. J. McKee

Houston, Texas

IMPACTION OF DOG'S STOMACH

Sometime last November, I examined a large hound, about twelve years old, and presenting the following symptoms.

He seemed to have pain at times and would strain very often trying to defecate, sometimes passing a small amount of feces. On palpation of the abdomen, one could feel a hard substance, about the size of a hen's egg, which could be moved backward and forward, and my diagnosis was a hair ball.

A large dose of castor oil was given with instructions to give another dose of oil if sufficient action was not noticed in twenty-four hours, but the owner thought the dog did not need any more oil. Some time later another examination was made, and the substance was still at the same place as on the previous examination but no smaller. The symptoms continued but the straining was less frequent. In the meantime the owner had been giving some oil at times with no results.

I advised an operation as the lump felt very hard and could not be voided naturally. However, the owner put off bringing the dog until April 1st of this year. By this time the animal was very much emaciated and his appetite was greatly impaired. The lump had grown to about the size of a cocoanut and could be seen very plainly in the left side of the abdomen. On examination, one might have concluded that a tumor was present. The dog was getting no better but growing worse, and the owner wanted something done, although the age and vitality of the animal seemed against him.

The patient was given a general anesthetic, H. M. C. No. 1, followed by ether. The left flank was shaved and prepared by cleansing with ether and iodin. An incision was made over the enlargement, which was found to be in the stomach. The incision was made large enough to permit removal of the mass. The stomach was then opened sufficiently and the impacted material removed. It was found to be very hard and dry fecal matter. In front of this mass was a quart or more of semi-solid substance mixed with bits of bones and other

XUM

material. This had a very fetid odor. The operation was successful, and the dog lived about six hours but never fully regained consciousness.

The animal seemed to suffer a great deal in the semi-conscious condition and had to be given opiates. The incision in the stomach was closed with a continuous suture. The abdomen was filled with normal saline solution. The external opening was closed with interrupted sutures and painted with iodin.

O. F. Foley

Bridgewater, Va.

NEOARSPHENAMINE IN PERIODIC OPHTHALMIA

In the July issue under "Items of Interest to the Practitioner," by Dr. A. T. Kinsley, I read of the use of salvarsan in periodic ophthalmia. In one case of periodic ophthalmia in which the patient had had three recurrent attacks, I used neoarsphenamine hypodermically about sixteen months ago with the result that there have been no attacks since.

J. J. Shelly

Bethlehem, Pa.

WILL A SMALL BUNCH OF SHEEP PAY?

A client of mine wanted to get into the sheep business in a small way and bought thirteen ewes. On March 29th I was called to assist a cow deliver twin calves, and while on the farm, I noticed to my surprise that five of the ewes had lambed and they had fourteen living lambs. The other eight ewes lambed in a few days, and the total number of lambs was thirty-four. How's that for getting into the sheep business?

C. L. Reece, D. V. S.

Savannah, Mo.

THE SOCIAL STANDING OF THE VETERINARIAN

After reading Dr. Mann's article in the May issue, I wish to state that as yet I have never had occasion to be ashamed of my profession. I have many friends of the best class, and many of them are eager to learn more of our profession and its work, and I am always glad to tell them of it.

I am an officer of the local humane society and always find the police willing to cooperate. Recently I was appointed milk inspector for the city of Bethlehem. In conjunction with this, I have a rapidly growing practice, which last year, my first year in Bethlehem, amounted to $6,850.00 in spite of the low fees prevailing here.

I am a booster for Veterinary Medicine and will always remain so.

John J. Shelly

Bethlehem, Pa.

LENGTH, SHAPE, OR WEIGHT OF EGG NO INDEX TO SEX OF CHICK

If you are one of the many who believe that the long, slim, heavy hen eggs are the ones which hatch out the male chicks, and that the smaller eggs are the ones which give birth to the future layers of the flock, you need to revise your opinion on the matter, says the United States Department of Agriculture. You may as well leave your tape measure, scales, calipers, and other units at home when you go forth to purchase a "setting of eggs" from your poultry breeder, and rely solely on mother nature to give you a fifty-fifty deal in the matter of sex.

In answer to the continuous stream of inquiries pouring into the department office relative to determining the sex of the chick in the shell by the size, shape, or weight of the egg, the department says "it just isn't being done." That is, not in a practical way, at least. The scientist is able to identify the sex of a chick in the shell after 7 or 8 days of incubation, however.

Because of the important bearing on the practical aspects of the poultry industry which the ability to select hatching eggs according to the sex desired would have, if such were possible, a number of investigators have made studies concerning the sex-ratio situation in the domestic fowl. Recently Dr. M. A. Jull, Poultry Husbandman of the United States Department of Agriculture, completed some observations in which he concludes that there is no correlation between the length, shape, or weight of the egg and the sex of the chick hatched from it. He has also made studies to determine whether or not there is a correlation between the weight of the egg yolk and the sex of the chick, or between the yolk water-content and sex ratio, with the same negative result.

It has been determined, however, says Dr. Jull, that the greater the number of eggs which a hen lays before being put into the breeding pen, the larger will be the proportion of females and the smaller the proportion of males produced by her eggs. The practical poultryman may be able to take advantage of this fact to some extent by making his selection of eggs for hatching with reference to the hen's period of production.

WHITE DIARRHEA

Bacillary white diarrhea is practically the only infectious disease of importance affecting chicks, although dietary and other conditions frequently cause symptoms which closely resemble this disease. The disease is most prevalent during the hatching months, March, April and May. In most instances the young chicks are affected with the disease when born, since it is an ovarian infection contracted through the egg. The hen is the carrier and is responsible for the transmission of the disease. Occasionally young chicks become infected in incubators previously contaminated by other infected chicks. The mortality in this disease may reach eighty to ninety per cent, while the chicks are most susceptible two or three days after hatching.

The affected chick peeps constantly as though in pain. Diarrhea is an outstanding symptom. The individual becomes unthrifty and "pot bellied," the neck is drawn in and the wings are drooping. As death approaches, the affected chick falls to the ground apparently unconscious and soon dies. This disease is best controlled by having the veterinarian collect samples of blood from each mature bird in the flock. These blood samples can be submitted for laboratory examination, and the affected birds can be detected in this manner. All reacting birds should be disposed of. Again sanitation is of the utmost importance.

Pitman-Moore Co.

T. B. TESTERS INSPECT BOTH THE HEN AND THE COW

Veterinarians engaged in the tuberculin testing of cattle in Green Lake County, Wis., have found it possible to inspect the poultry flocks on the farms visited without slowing up the regular cattle-testing work. This is significant, says the United States Department of Agriculture, when it is realized that there is no special Federal appropriation for conducting a campaign against avian tuberculosis, and that the poultry flocks of the county must be cleaned up along with the herds of cattle if the eradication of the disease is to remain permanent.

Operating in the regular way, the veterinarians in Green Lake County inspected 1,032 flocks on the farms visited for cattle testing. They found 153 flocks infected, and the balance apparently free from the disease. Two hundred and eighteen post-mortems, slightly more than one in each infected flock, were held. Altogether, it was estimated, more than 72,000 fowls were inspected.

An estimation of the extent of tuberculosis among the poultry flocks of the country shows the disease varying from 1 to 15 per cent.

A definite effort to inspect poultry was begun in February. In the various states during the first two months of the work 46,665 flocks were inspected, 2,565 of which were found to be infected. It is estimated that nearly 3,000,000 fowls were inspected during this period.

THE PERILS OF PRACTICE

Apropos of the question, "Where are the other twenty-seven?" page 286, June, Veterinary Medicine, by Dr. Rembrandt Morgan, Winfield, West Virginia, I wish to answer that I have been reliably informed that some painstaking person found out and compiled as far as possible the periods of time spent as actual practitioners by all graduate veterinarians in the United States that could be traced. It averaged less than seven years. Did it formerly take a strong man to stand a general veterinary medical practice in the country? Yes, indeed, and if he is not pretty robust he does not last very long now. What then can be said of those that remain faithful in the harness to the end? Well, there is an old saying, "There is no accounting for tastes," and perhaps that will apply. I am also guilty.

Many uninformed think that the veterinary profession is a bed of roses, an Eldorado, a regular pudding. The lot of the older country veterinarian has not always been a happy one: and often unless he had a sideline he had an uphill business to make a living during several periods in the last forty years. Personally, I know nothing of a city practice. In real veterinary medical practice, I know the law is progress and study which always entails some expense, such as books, magazines, meetings, dues, etc., and the need for mental exertion never ceases. Hence, to the aspiring veterinarian, his pursuit never becomes a routine business.

The veterinarian (I refer more particularly to the well posted, older country genus) has many, many times faced contagion and noxious vapors, encountered the filthiest kind of filth and the worst of stinks and performed many herculean, distasteful and disagreeable duties. What, then, I repeat, must be the attributes of such a man? Answer: "Invincible faith, unconquerable courage and unfailing loyalty to his profession."

Yes, and when this modest and faithful old

practitioner goes to the state and national meetings and he sees and hears the B. A. I. people, the research men, the professors, the specialists, the prominent national and even international veterinarians (ninety-nine per cent of them under salaries), oh, how small he feels, how insignificant he thinks himself to be when he analyzes his own mind!

I have often wondered of late where the "hewers of wood and drawers of water" in the veterinary profession from now on are to come from. Will the county agents take their place? I trow not.

It is told with broad grins and as a never-to-be-forgotten joke around here of a long, windy spiel on the subject of poultry being delivered hereabouts by one of those "Vet. Ags." (as they are called at the universities after taking several weeks of veterinary lectures), and one of the hens he exhibited and had selected, he stated had not laid an egg for six months and it would be a long time before she would lay again, etc. Before the lecture was over the old hen flapped her wings and announced there was a mistake somewhere for she had just laid an egg, and there it was! $3,500 a year for imparting such information! How do you like this paternalism or socialism, pure and simple, anyhow?

I don't blame a real farmer for becoming a county agent. In fact, I say, "All hail to the county agent." But an impractical or overreaching one, I consider a dangerous charlatan.

The old time, horse-driving, mud-road, gumboot veterinarian was nothing less than a martyr. He was at times more often called at night and compelled to undergo exposure and loss of rest. Perhaps he was forced to go many miles on a cold winter's night or before breakfast at full speed to attend needless but harassing calls from people who fancied their animals were about to die or from others who could have sent for him at a more reasonable time. Unnecessary work of this nature is the kind that ruins a man's health.

A man once called me out of bed (no telephones then) to attend his sick mare twelve miles from the office. I started and arrived about as soon as my client did. It was a winter's night, dark as Egypt and pouring rain. While I was tying my horse under a shed, I could hear the farmer's sick mare plunging around in the barn. The other stock had not as yet been moved there. The barn was a new one and there had been no partitions or loft as yet put up; consequently, the building was full of farm implements, feed, etc., in riotous disorder. The man went to the house and returned with an antique lantern, and by its Gothic rays we discovered the poor mare floundering around in a lot of wet and partially frozen corn fodder, of which there was an immense quantity standing around the inside of the barn. The floor had not been leveled up and was about as dry as a bed of mortar.

We dragged the mare out of the fodder, boarded up and bedded well a place in a corner where she could roll and not hurt herself, cleaned her off, tied some old carpet on her, and gave her, as "Old Andy" used to recommend in his lectures in pre-Volstead days, "a warm diffusible stimulant." She had colicky pains occasionally. I then sent the farmer to the house for some warm water. The mare was easier by that time, and I sat down and waited for about half an hour.

It was thundering, lightning, blowing and raining, and I expected the man to return every minute. I consulted my Ingersoll chronometer quite often and doctored that obsolete frostproof lantern and turned it low to save the lard. The man had been gone a long time. I leaned back against the fodder and closed my eyes, I thought, for only a few minutes. Anyhow, when I awoke, the lantern was out, and the mare had escaped from her extemporized boudoir and was again floundering around at a furious rate in the fodder and implements very close to me. In my bewilderment, I lost my bearings and unluckily I had no matches. A flashlight was then unknown.

Reader, were you ever lost in the blackness of midnight in a barn with only a sick, loose, struggling horse for company, a lot of agricultural implements and about twenty tons of wet corn fodder all in sweet confusion? I hope not. I hardly knew what to do. I secured my grips, and for about an hour, I made divers (divers is good) excursions over the fodder, against farm machinery and around the barn wall before I found a door I could open. I was like the backwoodsman in the fashionable church, I "riz and fell about ev'ry two minutes," and from my uprising to my downfalling, I fervently maintained a full measure of "gutteral" verbosity, and I am not much ashamed to admit that such an experience prevented me at that time from remaining true to the better instincts of the thorough religious training I received in my youth.

I finally found a door I could open and I fell out of it on my hands and knees. It was growing colder, still raining and lightning, and the darkness could be no blacker. I was not ac-

quainted with the place nor the location of the house and could see no light in any direction. Drenched to the skin, I tramped around that barn, waiting for the lightning to illuminate my surroundings so that I might locate the house. I had lost my rubbers in the mud which was ankle deep, and I had halloed until I was husky, and for all the good my yelling had done, I might as well have rendered the same amount of noise transposed into psalms and sung them to a dead horse.

By the aid of the lightning, I finally sighted a log cabin standing out in the middle of a big field. I started for that cabin as soon as I sighted it, waded through a ditch, fell over a pile of rails, and walked until I thought I was near the cabin, then waited until the lightning flashed again, when I found I had veered to the left and was as far as ever from the house. I started up several times and finally ran plumb against the corner of the residence. I cautiously worked my way around to the door, opened it, and there before a blazing log fireplace lay my client fast asleep.

A kick in the ribs brought him to a sitting position, when he explained that he had been sitting up with a sick neighbor for several nights, and while waiting for the water to heat, had fallen asleep. We went back to the barn. Lighting a few matches, we found the mare quietly munching some fodder, and from that time on she seemed to be all right. We tied her up, went back to the house, and tried to dry my clothes. I obtained the man's address so I could book the charge (which was never paid) and drove my horse twelve miles home, arriving just at daybreak.

Speaking of pay for veterinary services, no doubt many sorrowful and many very funny stories could be related regarding it. I have been compelled to receive pumpkins, old rails, sand (a veterinarian needs that), manure, sawdust, stove wood and green tomatoes as currency against services. And again, speaking of currency, I witnessed a horse trade a few days ago in which an ancient pair of "jeans" pants figured as the boot.

Lots of people envy the veterinarian. Too many people think, "Everybody has a snap but me." The veterinarian has troubles of his own, and he is not always what he seems to many people—a very prosperous and happy individual.

"All live by seeming;
The beggar begs with it, and the gay courtier
Gains land and title, rank and rule, by seeming;
The clergy scorn it not, and e'en the bold soldier
Will eke with it his service. All admit it;
All practice it, and he who is content
With showing what he is, shall have small credit
In church, or camp, or state. So wags the world."

S. R. Howard, V. S.

Hillsboro, Ohio

THE MODERN VETERINARIAN AND HIS SOCIAL STANDING

In dealing with this rather difficult topic, sight is often lost of the fact that the veterinary profession as an entity and as an economic and social factor in American society with its modern purposes and associations, is only of a rather recent date. Had there been, which decidedly was not the case, merely an immigration of scientifically trained and skilled veterinarians from the older countries into the United States, as in South Africa and India for instance, then the difficulties of veterinary education and consequently of the standing of the veterinary profession as a necessary adjunct of the medical sciences, with proper regard for public sanitation and state medicine such as fostered by the British in all their possessions and protectorates, would not have been nearly so pronounced and hard to overcome.

But in our country, things were very different. Necessity and aptitude both made practical men the guardians of the livestock industry, which then was only of a pastoral nature. As things went on and development in all branches brought skilled and highly technical methods into the public eye, the demand for trained workers grew incidentally. The impetus so helpful in many European countries to foster the veterinarian's social prestige and his sphere of importance given by the armies, never was of importance in the United States up to the time of the recent conflict.

True, there were empirics scattered here and there who were forerunners, we might even say pioneers, in a new field; but with the development of agriculture and animal industry of today, their field of usefulness is as much limited as that of the old time barbers, who then were regarded as the men to turn to in any emergency requiring more than the everyday skill of their customers.

It is only through recent legislation that the legal status of the veterinarian has been defined. Even yet this does not hold true in all states, since some of them cannot boast of a practice act regulating veterinary medicine.

It must not be forgotten that standardization

of entrance requirements for prospective veterinary students for admission to veterinary college, is only of comparatively recent date.

This is no occasion to enter into a tirade against the empirics. They were necessary in the general scheme of things as they existed in all professions, not alone in that of veterinary medicine. They are, however, responsible for many freakish and absurd superstitions and ideas which exist today with regard to veterinary work and activities in many and many a head. But that these ideas are still rampant and still upheld, is something which in my estimation is due to the fact that the profession as a whole just lacked the necessary time, deplorable as it may seem, to educate their clientele to the proper ideals, work and usefulness of the modern veterinarian.

The recent world conditions have caused, not only in the veterinary but in all other professions, a decided drop in the financial returns of the practitioners, and it is due to this fact that many things have been blamed and many things thought to be the causes of the veterinary profession as a whole being seemingly unattractive to the prospective veterinary student. Hard times, financial difficulties, however, will pass. But they have made many a man forget the achievements which no other profession can boast of, and they have permitted him to become dissatisfied and disgruntled. Many a one will sooner or later forget his grievances with the return to more normal conditions. Who after the return to more normal conditions, now only a matter of a short time as it seems, is still afraid to take up the good fight for that much wanted place in the sun or who still feels socially degraded, may go into one of the many specialties that our profession offers, as for instance, public health work, etc. But the busy, successful man does not worry over those things. His position is assured.

It is the practitioner in the country and smaller towns upon whom rests, we admit, the most difficult responsibility with regard to maintaining the social standing; but again just by reason of being a country practitioner, he has it much easier to maintain his prestige. We point to Dykstra's recent article with regard to this phase.

It is only recently that the French veterinarians were privileged to assume the title of Doctor of Veterinary Medicine. In Germany, Austria and Switzerland, just naming a few countries where veterinary education is old, certain conditions are attached to that privilege (an original thesis on some original research work, additional time and financial outlay consequently and graduate study) and in Denmark the Doctor of Veterinary Medicine does not exist at all, but still in all these countries the social standing of the profession as a whole is excellent.

We must not lose sight of the fact that as the scope of our work increases, so increases as well the sphere of contact and touch with others. A broader scope of work means a broader public recognition. Dairy inspection, tuberculosis eradication, poultry practice, were all unheard of some years back. Superior knowledge always commands prestige.

It would lead us too far to go into these things in detail, we only mention them to show that here in America the proper background exists today. It has come about much quicker than in the old countries, where scores of years and many disappointments had to be faced before the goal was reached. We cannot win social position by dodging issues—they must be faced and fought.

A raised standing in any community calls for knowledge, personality and personal charm above the average naturally. Why is it then that so many members of our profession (judging by some very recent letters and publications) fail in this particular thing? Drs. Salmon, Liautard, Law, just to mention a well known few, as well as many of our contemporary leaders in our chosen profession, surely did not and do not lack social distinction. And through what medium, may we ask, did they obtain it? Through their professional skill, ability, and, of course, their personality. And the same chance is there today, if not a much better one.

Veterinary science is progressive. It is a matter of time only, and a smattering of knowledge will not suffice. Knowledge commands confidence, confidence begets esteem, and the esteem of our fellow men is social prestige. The modern veterinary courses surely provide our young men with a fine, broad education and thereby enable them to hold their own with any other professional men. It is to the young practitioners we must look when prophesying, and if one but looks one finds more and more wherever the young men are, the old "horse doctor" is losing ground.

There is another phase often forgotten. There is one blessed heritage the recent war has left us, and it is the Veterinary Officers Reserve Corps. As a section of the regular Reserve Forces, it has contributed immensely to the social status of the individual and of the pro-

fession as a whole. Members of the profession in all capacities, teachers, state veterinarians, commercial workers, laboratory workers, and last but not least, the practitioners, are invited to join its ranks. Have those who talk about the low standing of the veterinary profession ever taken pains to investigate the conditions in the Officers Reserve Corps with regard to the standing of the veterinary officers? If they do so, a surprise will await them. Men of all walks of life belong to the Reserve Officers organizations, including many veteran officers of the recent war. As a chance to bring the profession before the men who do things, it is splendid. Discrimination between a veterinary and another officer is unheard of, and why should there be? Has not the World War proved beyond any doubt the absolute necessity of the veterinary service? And service by itself commands an insured social position.

In bringing the C. M. T. C. camps before the public the Reserve Officers were especially active, and many an opportunity presented itself to the veterinary officer who wanted to help foster the idea. Surely this did not help to lower one's social standing. The fight for recognition in the Army was a hard one. Why let us lapse back from the fine position obtained if it can be kept so easily? It may entail work and certain duties, but the old proverb "noblesse oblige" never was more appropriate than here.

There is still another agency, which should not be overlooked, an agency which even before recognition in the Army was thought of, was already making history in establishing veterinary prestige and standardizing veterinary education and bringing it before the public. We mean the U. S. Bureau of Animal Industry with its highly trained staff and experts, many of whom belong to the veterinary profession. Just as helpful are the many state experiment stations and their work in bringing before the public the necessity for a real veterinary service. We are all familiar with the work and sphere of these organizations. The Bureau of Animal Industry has in several instances served already as a standard. It has been studied and its organization has been copied by many a foreign government, thereby tacitly admitting its superior value. All these we mention just to show that the stage is set, that the proper background exists and exists today.

In closing we must say that there does not seem to be any excuse for any one member of the profession complaining about the possibilities with regard to obtaining the social standing accorded to members of other professions. The proper setting is there today. Publicity in our cause is coming before the public daily in some form or other. The modern scheme of education of the veterinarian compares very favorably with that of any other profession. Chances for research even in foreign lands exist. Given the personality, individual aptitude and integrity, any veterinarian can attain an adequate social standing if he but seriously tries.

H. J. Magens, V. M. C., V. S.
Stewartville, Minn.

"THE PROSPECTIVE VETERINARY STUDENT"

It has been gratifying to see the number of discussions on this topic since my article in one of the spring numbers of Veterinary Medicine. For it is only by thorough and frank discussion that we may learn to understand the various problems that confront us as a profession.

We note throughout these discussions that various arguments are based on optimism and pessimism. Now we should not allow these things to divert our minds from the "facts in the case." Allow me, if you please, to call your attention to the fact that optimism and pessimism are both only "states of mind not always supported by facts," in other words, a mere matter of opinion that is not admissible before any tribunal where facts rather than opinions are used to compile the verdict.

For it is only by facing facts shorn from enthusiasm and prejudice that we may arrive at a decision that we may reasonably expect to endure the test of time. The whole problem may be put in three words, "facing the music." In these discussions we have been shown where the human physician earns less than $1,000 per year and that a veterinarian might lay by from $50,000 to $60,000 in twelve years. While both statements are no doubt true, they are far from the general rule of "average."

As far as monetary remuneration from private veterinary practice is concerned, I think it was well summed up by two of our class A practitioners of more than 25 years of experience when they said, "When you find a veterinarian who is relatively wealthy, you will find that he has made it outside of his practice or he has inherited it."

General practice has always, with the exception of recent years, paid a good living with a few hundred to put on the shelf at the end of the year, but has never been what you would call a money making vocation. This is true to the extent that a large number of practitioners have found themselves "short" in tiding over

this period of depression and persecution by vicious legislation and the like.

To support this let me offer some figures that came to me in a roundabout way from a commercial source showing that during 1924, in Iowa, 307 veterinarians had quit practice and that seven had entered practice. Now these figures look almost unreasonable, taking into consideration that at the beginning of 1924 we had about 650 men in practice, but when you consider that in the case of the four northeastern counties there are four men left in practice, one man to each county, it doesn't look so unreasonable after all. Further, at least one-third of the men with whom I come in contact would consider a salaried job if it were offered.

These facts lead me to come to the following conclusions:

(1) Private practice is an institution capable of self-support and the most important unit in disease control and therefore the most essential to successful animal industry.

(2) Its calling is founded on a sound basis and if allowed to progress without political interference will show a steady advancement in practical application and in research.

(3) It is hard to see the wisdom of agriculture in seeking through its various state and national legislatures, its various departments and bureaus, to subsidize with public money those agencies seeking to reduce the earning power of the man in private practice.

(4) Federal, state and extension departments are teaching, preaching and practicing free veterinary service by "experts" paid for out of the public treasury.

(5) A few more years of educating the public to free veterinary service paid for out of the public treasury will render private practice incapable of self-support, for common sense alone if nothing else teaches us that we cannot compete with the man whose salary and expenses are paid out of public money.

Be it the will of the majority as expressed through our federal and state legislatures by laws enacted and appropriations made to support them, we then as law abiding citizens must accept the verdict that veterinary practice is a state and federal problem and is not suitable as a private undertaking. Therefore, we should govern ourselves accordingly by either seeking employment by the powers that be or retire to some other calling.

Agricultural colleges maintaining veterinary departments offering the regular four-year course in veterinary medicine and teaching laymen the use of biologics including hog cholera serum and virus through their extension department veterinarians, must see the fallacy of this policy and either abolish the veterinary department or the vaccination schools, for one directly opposes the other, and sooner or later the taxpayers will tire of supporting both.

Personal observation and expressions of those with whom I come in contact lead me to conclude that the prospective earning power of the recent graduate from a veterinary school is a rather poor reward for four years of college work in addition to his high school work and the monetary outlay involved therein.

It is the argument of the educator that the recent graduates are better fitted to meet the problems of the profession than were the men who graduated thirty years ago. While this is true in one sense, we should add here that no man should count himself among the seasoned practitioners until he has had at least ten years of experience (or shall we say post-graduate work), I therefore maintain that to put in four years in a veterinary school and spend approximately $4,000 looks today like a poor investment to the man who has spent over twenty years in the profession and at the same time kept close enough to the commercial world to keep his feet warm and make two dollars for every one made in practice.

Henry Hell, V. M. D.

Wilton Junction, Ia.

ONE WAY OF COLLECTING FEES

A very wealthy man once told me never to refuse anything that was given to me, and I have found it to be worth something. Sixteen years ago, one Sunday morning, a friend of mine called me up and told me that his brother had a fine mare down in the road five miles from my place and did not want to spend any money on having her doctored as he had lost the mate the same way.

I accepted the gift and made a hurried trip to see the mare, which I found to be a nice five-year-old Percheron down with azoturia. She had been down thirty-six hours and was heavy with foal. I gave treatment and stayed with her. On Monday at 10 o'clock she got up. I took her home, kept her ten days and sold her for $200. That was the best doctor bill I have ever received.

Not long ago, a man gave me a cow that had a cough. I tested her for tuberculosis, found the reaction negative, and sold her for $30.00.

W. O. Groseclose, D. V. S.

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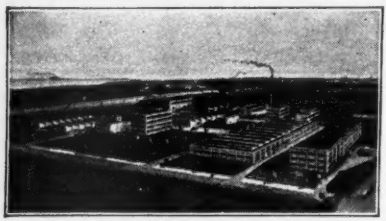

in large quantities by improved processes, insuring purity and accuracy. Here also are extracted from the crude drugs the medicinal principles used largely throughout the pharmaceutical industry as well as by the medical profession.

Larger quarters will be provided for the extensive research work now being carried on by a large staff of chemists and new buildings are being provided for the manufacture of the well-known Abbott pharmaceutical specialties.

The administrative office of The Abbott Laboratories, located for many years in Ravenswood, will be moved about October 1st of this year to the new plant. The postoffice address will be Waukegan, Ill., 25 miles north of Chicago on the C. & N. W. R. R. About 24 acres of ground are owned by the Abbott Company to provide for the future expansion of their business.

Dr. B. F. Kaupp will deliver an address before the Baby Chick Convention at Kansas City, August 6th, and from August 10th to 15th will be at Manhattan, Kansas, to attend the annual meeting of the American Association of Instructors and Investigators in Poultry Husbandry, of which he is president.

Partnership control of the Central Veterinary Hospital at Columbus, Ohio, has been dissolved, Dr. C. W. Borland retiring. The hospital will be conducted by the remaining owner, Dr. J. E. Turner. He will be assisted later by his son, J. H. Turner, at present studying at the Ohio State University. Dr. Borland is devoting his time to the marketing of a proprietary remedy for stomach trouble, the formula for which he originated.

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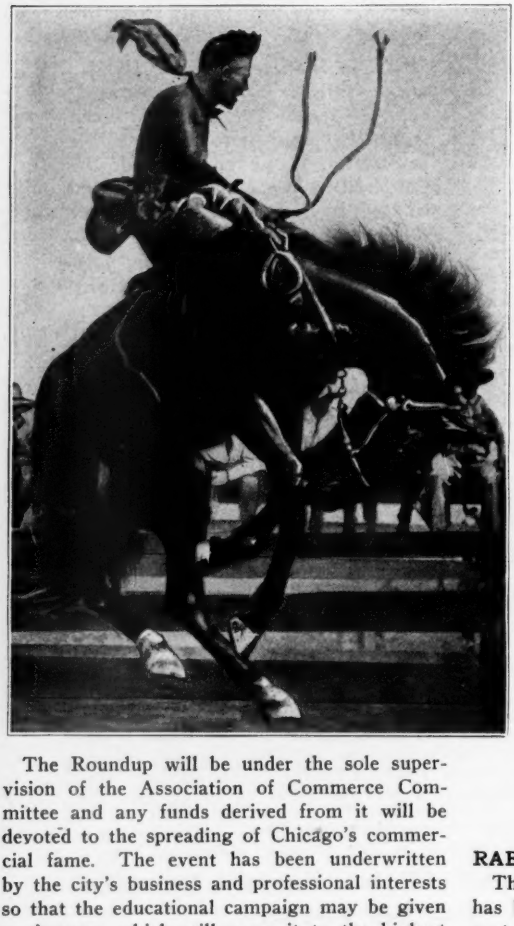
CHICAGO ROUNDUP AND RODEO CONTEST

The Chicago Roundup and world's championship rodeo contest will be held in the Grant Park Stadium for nine days, beginning August 15 as the initial physical effort to stamp the city indelibly on the national mind as the greatest mercantile, industrial and recreation center.



The Roundup will be under the sole supervision of the Association of Commerce Committee and any funds derived from it will be devoted to the spreading of Chicago's commercial fame. The event has been underwritten by the city's business and professional interests so that the educational campaign may be given an impetus which will carry it to the highest record of achievement and tens of thousands of new buyers aud tourists inspired to make the city their annual Mecca.

The story of the roundup and rodeo is the story of the real west, the west of Roosevelt, Masterson, Remington and Russell. The daredevil feats and defiance of death which have thrilled thousands at Cheyenne and Pendleton, will be enacted in the stadium by the same buckaroos, cowgirls, "bulldoggers" and "outlaw" horses which have perpetuated the days when Greeley advised the parlor athletes of the east to hurry their trek westward. Old championship rivalries will be fought out on the hurricane decks of "bad" bronchos and the necks of longhorn steers. Cash prizes aggregating more than $30,000 have been appropriated by the Association.

NEW YORK CITY MEETING

The regular monthly meeting of the New York City Veterinary Medical Association was held in the Academy of Medicine, West 43rd Street, New York City, on the evening of May 6th.

In the absence of the President, Doctor Bruce Blair, the meeting was called to order by Vice-president, Doctor Edward A. Durner. Two papers were presented, one by Doctor Adolph Eichhorn of Pearl River, New York, on "Recent Developments in Rejuvenation by Transplantation of Internal Sexual Tissues." This paper was of unusual interest, being a summary of the present knowledge of this comparatively new subject. It appeared in the July number of "Veterinary Medicine."

The next paper was presented by Doctor Louis Griessman on "Sodium Monochlor Crepilate and Hypochlorite of Soda," a carefully prepared resume of this new preparation.

Both of these papers were a little too technical for much discussion and the chairman announced that the next meeting would be held in the New York City Women's League Hospital, Lafayette and Bond Streets, it being the plan to alternate the meeting with clinics as often as practicable.

J. F. DeVine

RABIES ENDEMIC IN "LITTLE EGYPT"

The state director of health reports that rabies has been endemic in animals for years in that part of Illinois known as "Little Egypt," and that it is gradually extending north. More than twenty-five persons in fifteen counties have been attacked by rabid dogs since January 1, one as far north as Fulton County. No case of rabies has been reported in man this year, all exposed having taken the antirabic treatment. Twenty dogs and one cat examined (no two from the same locality) have shown the presence of rabies this year.—Journal A. M. A.

CHANGES RELATIVE TO VETERINARY OFFICERS, REGULAR ARMY

Captain Clell B. Perkins, V. C., is relieved from his present assignment as Assistant Professor of Military Science and Tactics at Ohio State University, Columbus, Ohio, effective on his return from temporary duty at summer training camp on or about August, 10, 1925, and will then report to the Commanding Officer, Fort Benjamin Harrison, Indiana, for duty.

Captain Solon B. Renshaw, V. C., is relieved from duty as Assistant Professor of Military Science and Tactics at Iowa State College, and will report on or about August 31, 1925, to the Commanding Officer, Fort Meade, South Dakota, for duty.

Captain Louis L. Shook, V. C., is relieved from duty at the Army Veterinary School and will report to the Surgeon General for duty as assistant to the Attending Veterinarian, Washington, D. C.

Captain Irby R. Pollard, V. C., orders amended: Ordered to Carlisle Barracks, Pa., for duty at Medical Field Service School as instructor in hippology and equitation instead of Fort Sill, Oklahoma.

1st Lieutenant Lester W. Ingram, V. C., is relieved from duty as transport veterinarian, U. S. Army Transport "Meigs" and will report to the Commanding Officer, Presidio of San Francisco, for duty on or about July 1, 1925.

VETERINARY RESERVE OFFICERS

Additional Reserve Officers:

1st Lieutenants:

Flora, Loren, Clark, South Dakota.

Waldron, A. William, 215 Washington St, Tullahoma, Tenn.

2nd Lieutenants:

Hill, Verne Clifford, 308 E. Gaines, Monticello, Ark.

Lee, Ward Royal, 403 Livingston St., St. Paul, Minn.

Steibing, C. C., 4520 7th Street, N. W., Washington, D. C.

Redfearn, Ernest E., 37 Livingstone Ave, Pittsfield, Mass.

Separations:

1st Lieutenants:

Boyer, Theodore R. 950 Pierce St., San Francisco, Cal.

Ridley, Warren Frank, Franklin, Ga.

2nd Lieutenants:

McAuliff, John Leon, 22 Pearne Ave., Cortland, New York.

Roberts, Howard Franklin, 4730 Gardena Ave., Pacific Beach, San Diego, Cal.

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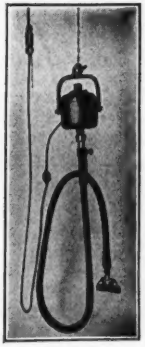

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CONNECTICUT MEETING

The quarterly meeting of this association was held at the Hotel Elton, Waterbury, Connecticut, May 6th.

President Edwin Laitinen called the meeting to order and that genial and capable secretary, George E. Corwin, who has kept the records of this association so long and faithfully, had many communications to transmit, which were of interest to the association aside from the regular program.

The first paper was a "Review of a Week's Cases," by Doctor J. J. Kavanek, Hartford, Connecticut. This paper was rather unique and is published in this issue of "Veterinary Medicine."

The next paper was "An Operation for Nasal Stenosis in the Horse," by Doctor C. A. Burnette, Winsted, Connecticut. The case, an unusual one, offered a fine opportunity for surgical resourcefulness and technic. Read the paper and see whether or not you think the Doctor up to his job. We were fortunate enough to secure a copy of this paper and it will be published, much to our gratification.

These papers were discussed briefly by many members, including Doctors Gilyard, Bland, Loveland, and DeVine. The legislative committee reported stating that the committee had appeared at the hearings of legislature, affecting the profession and the proposed amendment to the Veterinary Practice Act had been passed by the legislature. The Meat Inspection Bill is yet to be acted upon.

Doctor M. Ray Powers reported that the Minnesota University had recently announced through a bulletin that the nicotine treatment for stomach worms in sheep had not proven effective.

Doctor Thomas Bland reported his experience with a flock of poultry, where the birds showed sickness characterized by drowsiness and paralysis, death following in about three hours. On investigating the matter carefully, it was found that skunk cabbage had been pulled and fed to the chickens and was the cause of death.

Doctor Patchin reported having been called to see a flock of poultry, afflicted with cannibalism. To stop it spoiled meat had been bought, including salt pork. A great many of the chickens died immediately and autopsy showed a hemorrhagic condition characteristic of salt poisoning.

Commissioner of Domestic Animals, Hon. J. M. Whittlesey, was asked by the President to take part in the program and in his characteristic way, discussed livestock problems and the control of livestock diseases by the veterinary profession in a sincere, practical manner. He is very much in favor of a State Veterinarian and expressed much hope in the progress of the work and sanitation and particularly the control of tuberculosis and expressed faith in the attitude of the legislature and people in general as being in favor of doing everything for the eradication of this scourge.

Infectious mastitis was next discussed, it being a serious thing in the state of Connecticut, which is probably equally true of other dairy districts.

Doctor L. L. Kavanek recited experiences with bacterins both as an immunizing and curative agent, which could leave no doubt as to the merit of bacterins in the control of this annoying and discouraging infection.

J. F. DeVine

AN EXCEPTIONAL OPPORTUNITY

Any veterinarian who contemplates pursuing graduate work to qualify himself to fill a more responsible and remunerative position should be interested in the part time position now open in the Department of Veterinary Science at the University of Wisconsin. Besides carrying a salary this position permits the holder to take courses in animal chemistry (nutrition), animal breeding (genetics), animal pathology (bacteriology), animal parasitology (zoology), animal husbandry (feeding), or any other subject offered by the various departments, schools, and colleges of the university.

The present incumbent, Dr. E. M. Gildow, Washington State College, 1922, was granted an M. S. degree in June and has been appointed veterinarian and poultry pathologist at the University of New Hampshire at $2,300.

Dr. C. W. Julian of Ontario, Cal., has been appointed a representative of the division of animal industry of that state to inspect meat packing at the Upland Packing company.

Dr. R. C. Bunker, a recent graduate of the Ohio State University, where he received his veterinary degree, is also an athlete of some attainments. His home is at Delta, Utah, and he won the state championship at hammer throwing for two consecutive years, and this year he won the U. S. Athletic Association championship for the same event.

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Dr. Milton Fisher has succeeded his father, Dr. Robert F. Fisher, as city milk and meat inspector at Paducah, Ky. Dr. Fisher is a recent graduate of the Ohio State University.

Dr. Frank Hare graduated from Cornell University, Ithaca, N. Y., June 15th, receiving the degree of Master of Science. Dr. Hare served three years in the world war, also six months on the Mexican border in 1916. After his discharge from service, he completed the veterinary course at the Kansas Agricultural College, Manhattan, and was appointed Chief of the Bureau of Animal Husbandry of the Dominican republic. He spent three years on the island during the administration of Gen. Robinson, who recently was given command of the U. S. fleet. While working for his degree at Cornell University, Dr. Hare acted as an assistant instructor in laboratory diagnosis.

Resolutions expressing appreciation of the efforts of Dr. N. E. Williams, State Veterinarian of Texas, for his activity in the defeat of a veterinary bill in the senate which the association considered detrimental to the profession, were adopted by the State Veterinary Medical Association of Texas at their fifteenth annual meeting recently held at College Station.

Dr. Horace Bradley of Clayton, Mo., recently resigned as assistant state veterinarian and has opened a small animal hospital which he conducts in addition to his general practice.

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The dealer realizes the repeat value of these sales and takes advantage of it while the veterinarian not only loses the profit on the sale but loses also the advertising value of the labeled

XUM

package and the demand which the package would create.—Carter-Luff Chemical Co., Hudson, N. Y.

DEATH OF DR. E. H. BERRY

On the morning of Friday, June 26th, Dr. E. H. Berry of Leland, Miss., while under a temporary spell of melancholy ended his own life by firing a bullet into his head. The cause of the act is attributed to financial worries and ill health. Dr. Berry underwent a major operation December last from which he had never fully recovered. As soon as possible after his death, many veterinarians rushed to Leland to offer assistance to the bereaved family, Dr. C. D. Crawford, Dr. B. T. Huston, Drs. O. M. and E. S. Norton being the first to reach there.

Dr. Berry was a graduate of the Kansas City Veterinary College in the class of 1917; he returned to his home town, Tuscumbia, Mo., after his graduation where he was engaged in practice until the beginning of the following year when he entered the army. He served in the Veterinary Corps until the end of the war and came to Leland where he had been in practice ever since. Dr. Berry is survived by his excellent wife and two step children.

Doctor Berry was one of the noble men of the veterinary profession. He was an industrious, sober, honest, and conscientious practitioner, and was during his life in Mississippi, the paragon of ethical dealings. He was of a trusting, forgiving nature and was always liberal in his judgment of others. He never held malice against any man, but his sensitive, temperamental being was easily injured by the cruel, merciless ways of a commercial world.

The following is a clipping from his home paper which goes to show the high esteem which his people had for him: "The people of Leland are plunged into depths of sadness on account of the sudden death of one of its most beloved citizens, Dr. E. H. Berry. He was an eminent veterinarian, a splendid citizen, a deacon of the First Presbyterian Church. He was a mason and a member of the Frank G. Wingfield Post of The American Legion."

Dr. Berry was a member of the Mississippi Delta Veterinary Medical Association and the Mississippi State Veterinary Medical Association. He was always for the right and maintained his professional dignity above all other things.

The funeral services were held at Dr. Berry's residence in Leland at 4:30 p. m., Saturday, June 27, conducted by the Rev. Doctor Bitzer, assisted by the American Legion. The body was carried to its last resting place in the beautiful Leland-Stoneville cemetery. All flags of the little city was at half mast during the ceremony, and hundreds of Dr. Berry's friends were in attendance. The Mississippi Delta Association and the State Veterinary Medical Association sent handsome wreaths to the funeral.

The following veterinarians were in attendance: Dr. R. H. Mohlenhoff of Cleveland, Dr. O. M. Norton and Dr. E. S. Norton of Greenville, Dr. P. H. Momsen of Grenada, and Dr. C. G. Stallworth of Drew.

C. G. Stallworth

Dr. John Barnes, prominent pioneer and veterinarian of Olympia and Thurston county, Washington, for the past 30 years, died at Olympia, June 25th, at the age of 76 years. He was born in New York state in 1848 and came to Olympia in 1895, taking an active part in the upbuilding of the community. He is survived by the widow, three daughters and four sons.

Dr. Charles C. Lyford died at Roscoe, Ill., July 2nd. He had been ill since last November from heart disease. He was born in Roscoe in 1853, and in recent years had practiced at Osseo, Minn.

Dr. R. W. Heckert of Hartington, Neb., has been barred from practice for three months by orders of state officials, a charge of unprofessional and dishonorable conduct having been brought against him some time ago. His permit to perform the tuberculin testing of cattle has also been revoked. The transaction complained of was in connection with the testing of four dairy cows belonging to a Catholic sisters' school at Hartington several months ago. According to information obtained by the state authorities, Dr. Heckert represented to the sister in charge of the school that one of the cows had tuberculosis. In order to get rid of the animal, it was turned over to Heckert and he took it home. Later, it is reported, he traded it for a horse, which he kept as his own. The cow was traced later and tested, proving to be free from tuberculosis.

Dr. H. J. Larson and Dr. C. B. Erickson have formed a partnership to conduct a general practice at Pelican Rapids, Minn., under the firm name of Drs. Larson & Erickson.

Dr. Ralph B. Reid has become a partner with his brother, Dr. Fred Reid, in practice at Wash-

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ington, Iowa. Dr. Ralph Reid has specialized in poultry diseases under Dr. Murray at Ames, and canine work under Dr. Covault and will give these branches special attention.

Dr. A. E. C. Goodman has located at Barbadoes, British West Indies.

Dr. Wm. L. Grubb, formerly at Duluth, Minn., has moved to Chicago, Ill.

Dr. A. D. Knowles of Missoula, Montana, is now residing at West Palm Beach, Florida.

ILLINOIS MEETING

The summer meeting of the Illinois State Veterinary Medical Association at Peoria, Ill., July 8th and 9th, was one of the biggest and best ever held by the organization.

The principal feature of the meeting was the plan for reorganization of the profession of the state presented by Dr. J. S. Koen of Bloomington. This plan provides that the profession shall organize in such a manner that it can make its influence felt in any emergency that may confront it; that effort shall be made to harmonize its force with other influences in the state interested in the promotion and protection of the livestock industry; and that the association advertise in an ethical and forceful manner to let the public know just what the profession is and is doing. The plan was approved unanimously and enthusiastically by the members present.

A change in the by-laws was adopted to provide for seven districts over the state, each to have a representative, and these representatives together with the officers of the association to form the executive committee. This executive committee will replace the board of censors at the next meeting in December.

Dr. W. L. Williams, Ithaca, N. Y., a charter member of the association, gave some interesting reminiscences of the early struggles of the profession in Illinois. He also gave his views on the problem of sterility in cattle.

Dr. A. A. Leibold of Chicago, discussed bacterial vaccines. Small animal practice was dealt with by Dr. J. C. Flynn of Kansas City, Mo., also by Dr. F. R. Whipple of Peoria. Dr. E. E. Marsh of Springfield, and Dr. J. R. Christian of Woodhull, handled the subject of poultry practice. Dr. F. M. F. Meixner gave a most illuminating address on tuberculosis. Dr. J. J. Lintner, U. S. Inspector in Charge of Tuberculosis Eradication in Illinois, outlined the work of the B. A. I. and state forces and the progress made in this field. Dr. Robert Graham of the University of Illinois, gave a report on avian tuberculosis and its relation to tuberculosis in swine.

A tuberculosis and sterility clinic was held at the stock yards, the sterility program being in charge of Dr. Harry Caldwell of Wheaton, and Dr. W. L. Williams.

A banquet was held at Bradley Park, nearly 400 plates being served, making it the largest ever given by this association.

Dr. E. L. Law and Miss Ruth Elberta Batcheller of Lowry City, Mo., were married June 14th.

Dr. F. W. Morgan of Chattanooga, Tenn., has been appointed city meat inspector and also veterinarian in charge of the animal shelter of the Chattanooga Humane Educational Society. His appointment to the health department, succeeding Dr. Carl Wilson, became effective July 1st.

Practitioners, Army, B. A. I., and state veterinarians of San Antonio, Texas, and adjacent towns have formed the Bexar County Veterinary Medical Association, with the following officers: Dr. R. L. Rhea, president; Dr. M. E. Gleason, vice president; Dr. U. E. Marney, secretary-treasurer. Meetings will be held monthly.

Dr. C. Canion, Texas A. & M. College, 1925, is associated with Dr. U. E. Marney in the operation of the Alamo Dog & Cat Hospital at San Antonio, Texas.

Dr. and Mrs. Henry Hell of Wilton Junction, Iowa, immediately following the Eastern Iowa and Mississippi Valley associations' picnic at West Liberty, Ia., July 16th, left for a three weeks' vacation in Wisconsin. Mrs. Hell is spending most of the time at the Dells and visiting friends and relatives in eastern Wisconsin, her childhood home. Dr. Hell and his son, Chet, together with Mr. F. M. Gensch and son of Omro, Wis., are roughing it in northern Wisconsin, following trout streams, bass and pickerel lakes and enjoying themselves in the open.

Dr. J. R. Robertson has succeeded Dr. M. Shipley as head of the B. A. I. forces in Arizona engaged in the eradication of bovine tuberculosis.

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Dr. F. N. Davidson of Ontario, Cal., was recently appointed county veterinarian for San Bernardino county to fill the office made vacant by the resignation of Dr. A. D. Hubbell, which took effect July 1st. Dr. Davidson is also city sanitary inspector for Ontario, in which capacity he has acted for over a year. He is well known in that section and took a prominent part in the inspection work during the foot-and-mouth disease outbreak.

Dr. J. R. Merrick of Oberlin, Ohio, sustained two broken fingers and several dislocated knuckles in an accident while leading a horse behind his car with the halter rope wound around his hand. The horse reared back and pulled Dr. Merrick out of the car. In spite of the injury, however, the doctor was able to send in a case report for the August contest.

Dr. J. L. Holloway has moved from Gastonburg to Alberta, Ala.

Dr. W. H. Hendricks recently moved from Richmond to Salt Lake City, Utah, to assume his duties as State Veterinarian.

Dr. Charles Gruber was official veterinarian for the Tri-State Boston Terrier Breeders' Association show, held at Ft. Wayne, Ind., June 28th. Only Boston Terriers were on exhibit, more than 100 dogs being entered.

Dr. Chas. W. Gates, County Veterinarian, Quincy, Ill., recently delivered an interesting and instructive address on bovine tuberculosis eradication before the Adams County Board of Supervisors.

Forty-eight veterinarians and their families enjoyed a sumptuous feast and an interesting program at the annual meeting and fish fry of the Wabash Valley Veterinary Association, held at Merom, Ind., June 19th. Dr. J. E. Gibson of the B. A. I., in charge of bovine tuberculosis eradication in Indiana, spoke on the work being done in this field. Dr. Ellis Tade, a physician of Bicknell, praised Dr. Gibson for the good showing made by veterinarians in this campaign. Dr. Frank H. Brown of the state veterinary department, also discussed the subject and reported a number of poultry raisers having their flocks tested. Dr. J. M. Tade, retiring president, gave an interesting address. The next meeting will be held at Washington, Ind., September 18th.

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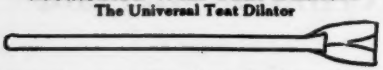

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Dr. S. R. Howard of Hillsboro, Ohio, has sent in a news clipping regarding Pierre Renaudel, a member of the French parliament, who completed a course of study in veterinary medicine but never practiced. His political enemies often refer to him with mingled sarcasm and scorn as "the vet." "Are you really a veterinary surgeon?" one of his millionaire colleagues asked him one day. "Why do you ask?" queried Renaudel naively, "Are you ill?"

Dr. A. A. Miller has moved from Forest City, N. C., to Brewton, Ala.

Dr. and Mrs. L. E. Smith of Jefferson, Iowa, had the misfortune of losing their only daughter, Leona, aged 9, on June 22nd, her death being caused by acute dilation of the heart, an after-effect of influenza, from which she suffered in April.

Dr. and Mrs. L. C. Hull of Joslin, Ill., suffered the loss of their son, Philip H. Hull, aged 29, a railroad brakeman, who was instantly killed in a derailment at McCloud, Cal., May 30th. Dr. L. C. Hull has been suffering from ill health since last fall, at which time he was in a hospital at Davenport, Iowa, and has since been under a doctor's care. He states he hopes to be on his feet again in the near future. In spite of his illness, he attended a district veterinary meeting at Moline, Ill., on June 24th.

Dr. A. L. Blake has moved from Pender, Neb., to Sioux City, Iowa.

Dr. Wm. Petrie of Los Angeles, Cal., died June 1st.

Dr. Charles W. Ferguson died at Tampa, Fla., May 16th. He was formerly at Auburn, Ala., where he was Assistant Professor in the Veterinary Department, Alabama Polytechnic Institute, for nine and one-half years. Ill health caused him to resign in September, 1922.

Dr. C. E. Teague, formerly at Thompson, Iowa, is now located at Dayton, Ohio.

Dr. E. E. Jones has changed his location from Ocean Park to Los Angeles, Cal.

Dr. T. I. Means has been appointed meat and milk inspector for the city of Salida, Colo., and in addition will conduct a general practice in that locality. He was formerly at Moffat, Colo.

"Call a Veterinarian" is the title of a recent folder sent to practitioners by the Sioux City Serum Co., outlining their campaign being carried on in eighteen publications for the education of farmers on the importance of having a veterinarian do their hog cholera vaccination.

Dr. S. L. Brown, formerly at Pullman, Wash., gives his new address as Portland, Oregon.

Dr. Theodore Roesch of Cedarburg, Wis., died June 12th after a long illness, having been confined to his bed for eight weeks. He was 46 years old. He was born in Merten, Wis., where he attended the grade and high schools. He later graduated from the Chicago Veterinary College in 1907 and then came to Cedarburg where he practiced the past eighteen years. He is survived by the widow and two daughters. He had long been connected with the Agricultural Society and at his death was its president. He was a member of the Advancement Association, the Beaver's Lodge, and was secretary of the Masonic Lodge 320 F. and A. M.

Rabies has been especially prevalent throughout several states this summer, press reports from Iowa, Oklahoma, Texas and Louisiana indicating the occurrence of outbreaks. The Dallas-Ft. Worth Veterinary Medical Association urged that the anti-rabic vaccination of dogs be made compulsory. A conference of health officials to consider the rabies situation was called at New Orleans, June 15th. The city health department of El Paso, Texas, was reported to be gathering information on inoculation of dogs against rabies, the data to be taken from some 125 medical publications in the United States and Europe. This was for the purpose of reaching a conclusion as to how a proposed compulsory vaccination ordinance should be

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prepared. Dr. J. B. Cook, county veterinarian, at Picher, Okla., reported the occurrence of rabies among dairy cattle in that locality.

Dr. Archie Stallings has taken over the practice of Dr. W. A. Knight at Houston, Texas. Dr. Knight is retiring after thirty-five years of work in this field.

Dr. A. L. Krool has moved from Kelliher to Baudette, Minn.

Dr. R. O. Curl of Sibley, Iowa, returned to his home the latter part of June after having been in the Mayo hospital at Rochester, Minn., for 75 days. He stated he was very weak but expected to be able to resume practice in a short time.

Dr. and Mrs. A. T. Kinsley and their son, Albert, left for Seward, Alaska, June 20th. Dr. Kinsley stated they would make the A. V. M. A. meeting at Portland on their way back and expected to return to Kansas City about August 1st.

Dr. C. R. Farmer, formerly at Brockwayville, Pa., is now located at Keokuk, Iowa.

Dr. H. C. Cram has changed his location from Stuttgart, Ark., to Memphis, Tenn.

Dr. S. T. Button, formerly at College Station, Ark., is now located at Star City, Ark.

Dr. R. C. Dickson has moved from Jefferson City to Fayette, Mo.

Dr. Charles H. Leavitt has changed his location from Vallejo, Cal., to Portland, Ore.

Dr. J. B. Simmons, who had practiced at Salt Lake City, Utah, for the past thirty years, died on June 22nd.

Dr. J. Enama, formerly at Lake City, Minn., has located for practice at Dassel, Minn.

Dr. S. A. Pittman has sold his drug business at Ft. Worth, Texas, and gone into practice at Childress, Texas, where he was formerly located.

Dr. J. A. Mitchell of Monroe, La., 46 years of age, was killed June 14th when a truck struck his automobile as he was returning from

a professional call. The doctor was so badly injured that death occurred within ten minutes.

Dr. J. Harvey Slater of Carrollton, Mo., was elected to membership on the board of trustees of the Missouri State Veterinary Association at its recent meeting in June.

Mrs. L. E. Ault, wife of Dr. L. E. Ault of Esbon, Kan., was severely injured when a car she was driving turned over, June 14th. She sustained a broken arm and other injuries. With Mrs. Ault were her husband and two children. One son received a broken arm, and Dr. Ault was thrown through the top of the car.

Dr. F. A. Hoell of Mansfield, La., has been appointed one of the four members of the Louisiana State Board of Veterinary Examiners.

Dr. W. E. Hughes has changed his location from Bellflower, Cal., to Nevada, Ohio.

Dr. C. L. Phillips gives his new address as Chattanooga, Tenn. He was formerly in New York City.

Dr. R. A. Moye has been appointed veterinarian for Delaware county, Iowa, and began work June 15th. He succeeded Dr. E. J. Kerr who resigned to take up inspection work at Chicago.

Dr. F. W. Milke recently opened an up-to-date small animal hospital at Milwaukee, Wis. He is a graduate of the Indiana Veterinary College, class of 1922. He was appointed staff veterinarian for the Wisconsin Humane Society in January, 1924, and is still active in that capacity.

Dr. C. G. Warner of Paducah, Ky., lost his hospital by fire which entirely destroyed the building, May 25th. The loss was estimated at over $3,000. Most of Dr. Warner's instruments and drugs were saved from the flames as well as a number of dogs, which were being treated at the hospital.

Dr. A. J. Sipos, formerly at Petersburg, Va., is now connected with the Virginia Live Stock Sanitary Board on tuberculosis eradication, with station at Manassas, Va.

Drs. Gearhart and Waugh of Pittsburgh, Patrick of Greensburg, Pa., Reefer of Wheeling, W. Va., and Wallace of Ashland, Ky., were among the judges at the horse show held in Pittsburgh, Pa., June 6th.

Drs. A. H. and Jos. Elkin of Smicksburg, Pa., sustained a loss of $4,000 recently when lightning struck and burned a large barn with horses and mules on their horse farm.

Dr. James O. McCoy, who graduated from the Ontario Veterinary College this year, is acting as assistant to Drs. Myers and Miller in practice at Lakewood, Ohio.

Dr. N. A. Christianson, aged 57, for many years in practice at Hinckley, Minn., died May 27th after a long illness. He is survived by two daughters and one son.

Drs. James W. Crowl and W. J. Sullivan of Washington, D. C., recently operated on a bull dog vaudeville performer and removed a golf ball which the animal had swallowed.

Dr. Fritz Murray of Taylor, Texas, has added a small animal department to his hospital, has accommodations for fourteen dogs, and has had a small ambulance built.

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Dr. J. G. Horning of Houston, Texas, states that from the looks of the veterinarians at the recent state meeting and the cars they drove, one would gather that practice in Texas is very, very good.

Dr. Charles A. Spicer died at his home in Coraopolis, Pa., June 21st, aged 72 years. He was a graduate of the Ontario Veterinary College, class of 1889, a native of Ohio, a blacksmith by trade, also a photographer and retoucher. He tried veterinary practice at various times and in many places but generally returned to photography. He suffered with valvular disease of the heart for several years.

Dr. Norman C. Craig of Washington, Pa., has been appointed one of the new field veterinarians of the Pennsylvania Bureau of Animal Industry and will be in charge of tuberculin testing in parts of Southwestern Pennsylvania. He is a graduate of the George Washington University, College of Veterinary Medicine, and has been in general practice several years.

Dr. A. M. Osten has located at Springfield, Minn., where he is associated in practice with Dr. B. J. Lattimer. Dr. Osten is a graduate of the Iowa State College.

Dr. F. Collins of El Paso, Texas, was bitten by a rabid cow and took the Pasteur treatment last May.

Dr. J. A. Winkler of Newport, Ky., has been elected a member and official veterinarian of the Campbell and Kenton County (Ky.) Medical Milk Commission. Dr. Winkler is also assistant state veterinarian in charge of the northern Kentucky district. The milk commission has for its purpose the encouragement of the production of pure milk.

Dr. G. F. Maynard, formerly at Batesville, Ark., has located at Tuckerman, Ark.

Dr. B. C. McClintock has located for practice at Sonora, Cal.

Charles Leslie was recently fined $100 in justice court for practicing veterinary medicine and surgery in Clatsop county, Oregon, without a license.

The Kentucky State Board of Veterinary Examiners issued a notice that every veteri-

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narian practicing in the state, whether a graduate or a non-graduate, is required to renew his license by the first of July of each year, otherwise he will be liable to prosecution. The fee for renewal is $2.00.

SAN JOAQUIN VALLEY MEETING

The regular monthly meeting of the San Joaquin Valley Veterinary Medical Association was held at Dr. J. R. Hoop's City Veterinary Hospital, 250 Broadway, Fresno, Cal., on the evening of June 3rd.

Fifteen veterinarians were in attendance. A very interesting program was given, including several papers and addresses. Dr. O. A. Longley of San Francisco was the guest of the association and gave a very interesting talk.

The association will take a vacation during July and August, meeting again in Fresno, Cal., the first Wednesday night in September.

The annual meeting will be held in Fresno in October.

F. M. Norris, Sec.

Reedley, Cal.

Dr. C. D. Rice of the Iowa State College, reported that mange in hogs was on the increase in that state, a survey last year indicating that the affection was present on 90 per cent of the farms. Dr. Charles Murray advises the use of crank case oil to control the condition, mixing one per cent of cresol or other standard disinfectant with the waste oil and dipping or spraying the hogs thoroughly. The treatment should be repeated if necessary and the treated hogs kept out of the sun for a day to prevent sun scald.

The Arizona Livestock Sanitary Board declared the office of the state veterinarian to be vacant, May 9th, thus depriving Dr. S. E. Douglas of his position. This action by the board is the result of alleged unsatisfactory handling of scabies quarantine and alleged friction with federal veterinarians in connection with tuberculosis eradication work.

The Tennessee State Board of Veterinary Examiners at its recent annual meeting reelected the old officers as follows: Dr. F. R. Youree of Lebanon, president; Dr. S. H. Woods of Murfreesboro, vice president; Dr. W. M. Bell of Nashville, treasurer; Dr. M. Jacob of Knoxville, secretary. The following licenses have been issued for the practice of veterinary medicine since the last meeting of the board:

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An unusual outbreak of black tongue among dogs was reported from Denver, Colo., during June, Dr. A. A. Hermann stating that nine out of ten cases died.

Dr. F. B. Jones, B. A. I. veterinarian, has been transferred from Carthage, Mo., to Harrisburg, Pa. For the past three years he was in charge of tuberculosis eradication in southern Missouri. In Pennsylvania he will have charge of the general work of combating contagious diseases of livestock. He left Carthage for his new position, June 22nd.

Dr. J. G. Berthelson has located at Herington, Kan. He was formerly at LaJara and Denver, Colo.

Dr. R. B. Spearing has moved from Newton to Manly, Iowa, where he has established himself in practice. He graduated from the Iowa State College this year.

Dr. W. R. Sanderson of Brownwood, Texas, delivered an address on the relation of the veterinary profession to public health before the Brown County Public Health Committee, May 29th. The address was published in local papers and will do much to acquaint the public in that locality with the character and achievements of the veterinary profession.

Dr. C. F. Palmer, B. A. I. inspector in charge at Houston, Texas, received an order from R. W. Dunlap, Assistant Secretary of Agriculture, June 3rd, placing an embargo on all cattle, feedstuff, hides and other by-products of the cattle industry from Jamaica, because of the reported existence of foot-and-mouth disease on that island.

Dr. J. R. Brown and Miss Mary Reid were married at Nashua, Iowa, May 23rd. Dr. Brown is a graduate of the St. Joseph Veterinary College. Miss Reid was principal of the junior high school at Woodbine, Iowa. They will make their home at Ringstead, Iowa, where Dr. Brown is established in practice.

Dr. A. B. Gibson has changed his location from Gowan, Saskatchewan to Exeter, Ontario.

XUM